# CHAPTER 2
# ALTERNATIVES

## INTRODUCTION

This chapter describes alternative ways of resolving the planning issues and sustaining the long-term health, diversity, and productivity of public lands in the Planning Area. The range of alternatives includes different approaches to balancing demands on public land, managing and protecting resource values, and reducing conflicts.

This chapter contains the following sections:

- **Developing the Range of Alternatives** – describes the process and key concepts used to develop the range of alternatives considered in detail.
- **Overview of the Alternatives** – briefly describes each of the key components of the four alternatives considered in detail, and includes a description of why Alternative B was identified as the Preferred Alternative.
- **Alternatives Considered in Detail** – includes a summary of the major components of each alternative and a more detailed description of each alternative by issue category.
- **Alternatives Considered but Not Analyzed in Detail** – briefly describes alternatives that were considered, but not in detail with rationale.
- **Comparison of the Alternatives** – describes the measures used to compare alternatives and includes tabular comparison of the alternatives considered in detail.
- **Comparison of Impacts –** describes the impacts of the alternatives and includes tabular comparison of impacts for the alternatives considered in detail.

## DEVELOPING THE RANGE OF ALTERNATIVES

The development of management alternatives for the Butte Resource Management Plan/Environmental Impact Statement was guided by provisions of the Federal Land Policy and Management Act (FLPMA) and the National Environmental Policy Act (NEPA) as well as planning criteria listed in Chapter 1. Other laws, as well as Bureau of Land Management (BLM) planning regulations and policy, also directed alternative considerations and focused the alternatives on appropriate land use plan-level decisions. Field Office-wide goals and desired future conditions for individual resource and resource use programs were identified by the planning team in consideration of public comment received through scoping as well as direction established by Bureau-wide initiatives and mandates. The goals would apply to all alternatives.

Four management alternatives were developed to address the major planning issues and to provide direction for resource programs influencing land management. The alternatives vary in how they emphasize different combinations of resource uses and management activities to address issues and resolve conflicts among uses. As a result, program goals are met in varying degrees across the alternatives. Management activities and prescriptions for management concerns or programs not tied to major planning issues often contain few or no differences in management between alternatives.

Alternative A, continuation of current management or No Action, is based on existing planning decisions that remain valid and current direction and policy. The remaining alternatives were developed with input received during scoping. Site-specific travel plan alternatives (site-specific implementation decisions) were developed by the planning team with the assistance of community-based working groups sponsored by Lewis and Clark County for three of the five travel plan areas addressed in this plan.

Vegetation management and treatment proposals were developed through the use of a model called SIMPPLLE—Simulating Patterns and Processes at Landscape scales. This model allowed the planning team to establish an approximate picture of historic vegetative conditions in the context of natural disturbance regimes (such as wildland fire, insect outbreaks, etc.) upon which to base proposed vegetation treatments. Additional information on use of the SIMPPLLE is detailed in **Appendix D**.

## OVERVIEW OF THE ALTERNATIVES

There are four alternatives considered in detail. This section provides a brief overview of each of those alternatives. Alternatives considered in detail include one "No Action" Alternative (Alternative A), and three "action" alternatives (Alternatives B-D) that would reflect various levels of change from the existing Headwaters RMP and Dillon MFP direction.

All alternatives include pre-existing management direction that is being carried forward in this RMP revision. This direction is presented in the section "Management Common to All Alternatives" and is not described in this overview. Continued management direction reflects the following categories:

1. Management Direction from legal statute, regulation, or manual direction. This management direc-

tion may not have been specifically included in the Headwaters RMP or Dillon MFP but includes management direction for things such as restricted uses near bald eagle nests or current regional decisions on noxious weed abatement techniques.

2. Management Direction from the Headwaters RMP/Dillon MFP, including amendments by subsequent modifications from other decisions that are not being revised by the Butte RMP.

Some of the issues identified early in this planning process were resolved using one approach in the "action alternatives". These are identified under the category "Management Direction Common to Action Alternatives" in the Alternatives Considered in Detail section. This management guidance represents areas where there was little controversy over the best way to resolve the issue. One example of this approach is the common management direction for the "action" alternatives to maintain or improve habitat conditions for special-status plant species by altering or removing trees and shrubs, prescriptive livestock grazing, prescribed and managed wildland fire, and planting. These components are not included in this overview.

Federal and state laws, regulations, and permitting requirements established to protect natural resources would be followed under all alternatives.

## ALTERNATIVE A – NO ACTION

Alternative A is the continuation of present management, referred to as "No Action". This alternative would continue present management practices based on existing land use plans and other management decision documents. Direction contained in the Headwaters Resource Management Plan and the Dillon Management Framework Plan would continue to be implemented. Direction contained in existing laws, regulations, and policies would also continue. The current levels, methods, and mix of multiple use management would continue, and resource values would receive attention at present levels with relatively little specific management direction or priorities compared to other alternatives. Motorized access and motorized recreational opportunities would not change from the current condition. One ACEC (Sleeping Giant – 11,679 acres) would continue to be managed as such. Eligible Wild and Scenic River segments would continue to be managed to protect the values that make them eligible.

## ALTERNATIVE B – PREFERRED ALTERNATIVE

This alternative emphasizes moderate levels of resource protection, use, and restoration. Alternative B places a priority on vegetative restoration. Quantities of forest-based commodity resources from vegetation restoration activities would be similar to Alternative A with a more holistic vegetative community perspective, greater than in Alternative C, but less than in Alternative D. Project-level wildlife habitat and riparian management measures would be greater than in Alternatives A and D due in part to establishment of Riparian Management Zones (RMZs) where managing for riparian values would be the focus, but less than in Alternative C where RMZs would be wider and with more protective management than under Alternative B.

Alternative B emphasizes more of a balance of motorized and non-motorized recreation and access opportunities compared to the other action alternatives (C and D). Four ACECs would be designated, totaling about 70,644 acres. Two rivers would be recommended as "suitable" for Wild and Scenic River designation. There would be more oil and gas leasing management measures than in Alternatives A and D, but less than in Alternative C. Alternative B represents the mix and variety of actions that in the opinion of BLM, best resolves the issues and management concerns and is therefore considered BLM's Preferred Alternative.

## ALTERNATIVE C

Alternative C emphasizes a lesser degree of vegetative restoration than any of the other alternatives. Production of forest-based commodity resources from vegetation restoration activities would be lowest of all alternatives. This alternative emphasizes a greater degree of project-level wildlife habitat and riparian management measures (wider Riparian Management Zones than Alternative B, no RMZs under Alternatives A or D) than in any other alternative.

Alternative C emphasizes non-motorized recreation opportunities more than the other alternatives. All potential ACECs (87,893 acres) would be designated with this alternative. All four river segments eligible for Wild and Scenic status would be found suitable and recommended for Wild and Scenic designation. Alternative C provides for the most oil and gas leasing management measures of any alternative.

## ALTERNATIVE D

Of all the alternatives, Alternative D emphasizes the greatest degree of active management to restore vegetative communities and would produce the greatest quantities of forest products from vegetation restoration activities of all alternatives. Alternative D features fewer wildlife habitat and riparian management measures than Alternatives B and C, but more than Alternative A. This alternative emphasizes motorized access and recreation opportunities more than Alternatives B and C. Three ACECs would be designated (23,695 acres). No river segments eligible for Wild and Scenic status would be found suitable or recommended for Wild and Scenic designation with this alternative. Alternative D would have the fewest oil and gas leasing management measures of all the alternatives.

# GOALS COMMON TO ALL ALTERNATIVES FOR ALL BLM ACTIVITIES

Throughout the BFO, BLM authorized activities associated with all resource and resource use programs would meet or move toward meeting the following standards to the extent practicable:

- Uplands are in proper functioning condition;
- Riparian and wetland areas are in proper functioning condition;
- Water quality meets state standards;
- Air quality meets state standards; and
- Provide habitat as necessary, to maintain a viable and diverse population of native plant and animal species, including special status species.

These standards were originally described as rangeland health standards (USDI BLM 1997), but would be applied to all BLM authorized activities as "Land Health Standards." More detailed descriptions of characteristics associated with these standards can be found in the Standards for Rangeland Health and Guidelines for Livestock Grazing Management Butte District section of the publication *Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Montana, North Dakota, and South Dakota*, BLM (1997).

# VEGETATION COMMUNITIES

Management of vegetative communities includes grasslands and shrublands, forests and woodlands (including forestry and forest products), riparian vegetation, livestock grazing, wildland fire management, wildlife habitat, and noxious weeds.

## Vegetation Goals

**Goal 1 –** Maintain and/or improve ecological site potential on woodland communities for sustainability and diversity.

**Goal 2** – Manage dry forest types to contain healthy stands of site-appropriate species; stands relatively open, and reproduce desired vegetation species.

**Goal 3** – Manage moist forest types to contain healthy stands that combine into a diversity of age classes, densities, and structure (including dead and down material).

**Goal 4** – Manage old forest structures in a sustainable manner. (Note: old forest structures are defined by the following: large, old trees; large standing dead trees [snags]; fallen trees or logs on the forest floor; multiple canopy layers; and a developed, patchy understory. In forest types subject to frequent, low-intensity fire such as dry Douglas-fir or ponderosa pine, old forest structure is typically characterized by relatively open understories and fewer large fallen trees.)

**Goal 5** – Manage upland vegetation communities to move toward or remain in proper functioning condition, including a full range of herbaceous and shrub species.

**Goal 6** – Maintain or enhance communities of priority species or habitats (for example, mountain mahogany, sagebrush, bitterbrush) to provide desired ecological functions and values. Additional specific goals are included for specific types of management of vegetation communities.

### *Forests and Woodlands*

**Goal 1 –** Restore and/or maintain the health and productivity of public forests, to provide a balance of forest and woodland resource benefits, as well as wildlife and watershed needs to present and future generations.

**Goal 2 –** Manage forestry resources to provide a sustained flow of local economic benefits and protect non-market economic values.

### *Riparian Vegetation*

**Goal 1 –** Manage riparian and wetland communities to move toward or remain in proper functioning condition. When at this condition, these areas have the appropriate composition, density, and age structure for their specific area. These communities are generally sustainable and provide physical stability and adequate habitat for a wide range of aquatic and riparian dependent species.

**Goal 2** – Manage wetland and riparian habitats to support healthy, diverse and abundant populations of fish and associated aquatic and riparian dependent species.

### *Livestock Grazing*

**Goal 1 –** Manage for a sustainable level of livestock grazing while meeting or progressing toward Land Health Standards.

**Goal 2** – Maintain, restore, or enhance BLM rangelands to meet the Land Health Standards.

**Goal 3** – Manage livestock grazing to provide a sustained flow of local economic benefits and to protect non-market economic values.

### *Wildland Fire Management*

**Goal 1** – Provide an appropriate management response to all wildland fires, emphasizing firefighter and public safety.

**Goal 2** – Move toward restoring and maintaining desired ecological conditions consistent with appropriate fire regimes.

**Goal 3** – Minimize the adverse effects of fire on resources, resource uses, and wildland-urban interface.

**Goal 4** – Promote seamless fire management planning across jurisdictions within the boundaries of the BFO.

**Goal 5** – Protect life and property by treating hazardous fuels on BLM lands near WUI.

### *Noxious Weed Management*

**Goal** – Minimize infestations of invasive plants and noxious weeds.

## General Approach of Vegetation Management Activities

The following discussion describes the approach that would be used for vegetation management activities within vegetation types found in the Decision Area under all alternatives. While in most cases vegetation treatments would be geared toward meeting historic vegetation conditions, it is recognized that this would not necessarily be the case in Wildland Urban Interface (WUI) areas where more substantial fuels reductions may be needed to meet site-specific conditions.

### *Grassland and Shrublands*

Prior to effective fire suppression, foothill grasslands were maintained free of invading trees and shrubs by periodic fires. With successful fire suppression, many grasslands are becoming woodlands or shrublands, and many shrublands are being converted to woodlands. These vegetation types would be treated to remove conifer encroachment and move towards a more desired ecological condition of open grasslands and shrublands with a low density of trees species. Grasslands and shrublands would also be assessed to ensure that uplands are in properly functioning condition. If these habitat types are not in properly functioning condition due to management activities, management would be modified to improve conditions.

### *Forest and Woodlands*

#### Dry Forest Types

Lower to mid-elevation dry forests are dominated by Douglas-fir and ponderosa pine. These forest types are typically interspersed with limber pine, Rocky Mountain juniper, grasses, and shrubs. Fire suppression and historic grazing practices have resulted in unusually high tree densities on many sites as well as excessive wildland fuels.

Treatments would be designed to mimic pre-fire suppression conditions and promote healthy and diverse forest ecosystems and wildlife habitat. Smaller diameter thinning along with low intensity understory burning would occur in seedling, pole and some medium (9 to 15 inch diameter at breast height (DBH)) sized trees to open the canopy and allow understory vegetation to become re-established. In the WUI, treatment emphasis would include mechanical or hand thinning, while prescribed burning would be minimized to lessen smoke impacts to local communities. Where burning is restricted, material could be mechanically reduced and left on site or mechanically reduced and removed. Outside the urban interface, prescribed burning would be emphasized except when not economically feasible or when the effects could be detrimental to vegetation or soils.

Mechanical treatments, which may include harvest of trees, would be used to accomplish restoration and thinning of dry forests. Trees in the small to large size classes would produce commercial forest products including lumber, posts and poles, and biomass.

#### Cool, Moist Forest Types

Cool, moist forest types are found at mid to high elevation and are dominated by Douglas-fir, lodgepole pine, subalpine fir and spruce. These forest types usually have higher tree densities with open parks and grass or shrub dominated meadows interspersed. Examination of BLM forest inventory data and analysis using the SIMPPLLE model indicates that the overall character of the forests found on BLM lands have changed over time with a reduction in the size and age class diversity within the majority of forest stands, and a reduction in the number and sizes of forest openings.

Treatments would focus on protecting healthy and diverse forest systems by reducing stem densities and creating appropriate openings to mimic pre-fire suppression conditions. In lodgepole pine stands, mechanical treatments which may include timber harvest would be used to create openings to mimic stand-replacing fire events and to regenerate lodgepole pine.

### *Riparian Types*

Riparian habitat can include vegetation such as aspen, cottonwood, willows, dogwood, and alder as well as a variety of other riparian dependant species. Riparian habitat can also consist of conifers such as Douglas-fir, lodgepole pine, ponderosa pine, and spruce. Riparian areas occur throughout all forest types, grasslands, and shrublands and have experienced many of the same effects of long-term fire suppression as described above. Some riparian habitats in the PA have also been degraded due to inappropriate historic grazing, mining, timber harvest, and road construction. Some riparian areas contain aspen clones that are being lost due to conifer encroachment or grazing by livestock and/or big game. Where conifers are outcompeting or precluding regeneration of aspen, potential aspen or cottonwood stands, conifers would be removed to provide suitable habitat for expansion of these species.

The emphasis for riparian areas would be on protection and restoration. Treatments in riparian areas would focus on re-establishing willows, aspen, and cottonwood stands as well as other riparian vegetation and to move towards pre-fire suppression stem densities in conifer stands. Riparian areas would continue to be evaluated using Land Health Standards and grazing practices would be modified when necessary.

## Vegetation Management Tools

A number of different vegetation management tools or activities would be common to all alternatives in implementing the approach described above.

Mechanical treatments would include tree removal through the use of ground based equipment, horses, helicopters, or any other appropriate methods. This would include thinning/removing medium (9 to 15 inch DBH) and large (greater than 15 inch DBH) trees and obtaining commercial wood products, thinning non-commercial-sized trees, and cutting non-commercial conifers that have "encroached" into grassland or sagebrush habitats. It would also include mechanical on-site treatments of non-commercial trees and biomass (vegetative materials that are by-products of management including 4 to 8 inch DBH trees) such as chipping, grinding, piling, or portable biomass/energy production. Mechanical treatments would be used to restore vegetative communities to desired future conditions as well as to reduce fuels in Wildland Urban Interface (WUI) areas.

The amount of forest products harvested would vary by alternative. This is due to different geographic priorities, acreage of vegetative treatments, and associated access development needed for successful treatment completion by alternative. Commercial uses of materials from vegetation management activities would be considered in all cases where appropriate.

Prescribed burning would be used to treat forest, grassland, or shrubland vegetation types. In grasslands or shrublands, prescribed burning would be used to kill encroaching conifers, removing dead finer fuels created by years of grass or shrub growth, and stimulating grass and shrub re-growth. In forests, prescribed burning would be used to reduce fuels generated by mechanical treatments and to thin understories, recycle nutrients, eliminate ladder fuels, create small openings or create and maintain a more savannah-like habitat, in stands dominated by medium and large-sized trees.

Noxious weed treatments would include, but not be limited to, hand-pulling; chemical spray; use of biological agents such as insects, goats, or sheep; cultural treatments such as modifying timing or intensity of other management activities; and public outreach. Other appropriate methods would be applied as they are developed and approved for use.

Changing grazing management or prescription grazing would also be used as a vegetative treatment. Management may include changing the season of use, the intensity of the use, or the kind of livestock.

## General Summary of Alternative Emphasis for Vegetative Communities

Alternative A would continue current management. Project-specific objectives and treatment types would be as described under "Actions Common to All." Projects would stem largely from reducing fuels in the WUI, performing silvicultural treatments, and deriving forest products from stand by stand management on a sustained yield basis. Some projects to improve grassland and shrubland habitats in big game winter range areas would also occur.

Alternative B would emphasize maintaining and restoring healthy, diverse, and productive native plant communities appropriate to local site conditions. This alternative would identify opportunities to actively restore vegetation on the landscape to conditions more consistent with landform, climate, biological, and physical components of the ecosystem. Vegetation structure, density, species composition, patch size, pattern, and distribution would be managed to provide habitat for a variety of wildlife species while reducing the risk of uncharacteristically large and severe disturbances (such as forest insect epidemics, wildland fires). Actions would maintain or mimic natural disturbance regimes to provide for diverse and sustainable ecosystems so that plant communities would be resilient to periodic outbreaks of insects, disease and wildland fire.

The major emphasis areas under Alternative B would be fuels reduction in the urban interface, reduction of conifer encroachment in grasslands and shrublands particularly in big game winter range areas, restoration of sagebrush habitat, enhancement of bighorn sheep habitat, and restoration of dry forest types. Treatments of cool, moist forests have lower priority under this alternative. Priority for restoration and protection treatments would be given to forested areas with heavy fuel concentrations, limited vegetative diversity, and declining in health. Areas with an increasing risk of insect infestation or loss of important habitat values would also be given precedence for treatment. Priority areas for treatment under Alternative B include the Jefferson, Upper Missouri, and Big Hole watersheds.

Alternative C would provide for ecosystem health and diversity by focusing efforts on maintenance and protection of current conditions. As with the other action alternatives, vegetative treatments would still allow for restoration of habitats that are substantially outside the range of the historic condition, which are based on 500 year vegetative habitat trends from an analysis of current vegetation in the SIMPPLLE computer model. (**Appendix D – SIMPPLLE Model)** High priority habitats would include dry forest habitat and grasslands and shrublands in big game winter range areas. Treatment of the WUI to reduce the risk of fire would also be high priority for this alternative. In general, treatments for ecosystem health, habitat patch size and treatments to reduce the threat of wildland fire in the urban interface would be smaller under Alternative C than the other two action alternatives.

The priority treatment areas in Alternative C would be forested locations that have existing road access and the

Upper Missouri watershed due to higher urban interface concerns there.

Alternative D would have a similar emphasis and approach as Alternative B, but would include areas requiring a greater degree of vehicular access development. The major focus areas under Alternative D would be fuels reduction in the urban interface, reduction of conifer encroachment in grasslands and shrublands, restoration of dry forest types, and maintenance of existing "healthy" forests (such as open, "savannah" dry forest types). Priority areas for restoration and protection treatments include Jefferson, Upper Missouri, and Big Hole watersheds.

Historic vegetative acres generated by the SIMPPLLE Model (**Appendix D**) for each major watershed were used as a "guide" to determining the number of acres proposed for treatment in different habitat types.

For each action alternative, vegetative treatment acres were further refined by taking into consideration the following factors; adjacent land ownership and management, recreation sites, urban interface, designated semi-primitive areas, access to public lands, the existing road system, past treatments, wildlife habitat, wildfires, weed infestations, and topographical features. Current and past budgets were also used to verify the potential treatment acres by alternative. With the exception of noxious weed treatments, no Wilderness Study Areas were identified for treatments.

Proposed vegetation management actions described below refer to "project area" and "treatment area". A project area is a large area within which some type of management activity would occur and encompasses a region defined by logical boundaries such as; watersheds, ridges, highways or blocks of BLM lands. The project area can be both the analysis area and a starting point to determine where treatments should occur. A treatment area is a smaller block of land within the project area. A treatment area is the boundary of the area where the actual management activity, such as timber harvest or burning, would occur.

Proposed vegetation treatments are characterized below by numbers of acres (ranges) per decade. Multiple activities could occur within a single treatment area, concurrently or over time. For example, if 500 acres of grassland are proposed for treatment in an alternative, then there could be a conifer removal, or "slashing" treatment on these acres, followed by a separate prescribed burning treatment on the same acres, but since these treatments were applied to the same acres they would be considered as 500 acres of treatment in the context of RMP implementation.

## Management Common to All Alternatives

### *Forests and Woodlands*

Vegetation structure, density, species composition, patch size, pattern, and distribution would be managed in a manner to reduce the occurrence of unnaturally large and severe wildland fires and forest insect outbreaks.

Stands with characteristics indicating a substantial risk of developing epidemic levels of forest insects and/or disease would be high priority for treatments to reduce risk.

The forest product small sale program would continue to maintain a balance between public demand and the health and productivity of native and desired vegetation communities. Small forest product sales include over-the-counter sales of firewood, Christmas trees or other products for personal use, small amounts of materials removed as a result of other authorizations such as rights-of-way, road use agreements, grazing leases or other land uses, and public demand sawtimber or salvage sales. These activities usually take place in small areas or on scattered or isolated parcels often concurrent with similar activities on adjacent private lands.

Other products would include: house logs, posts and poles, vegetative cuttings, conifer boughs, wildings and ornamentals, grape stakes, juniper products, specialty cuttings, and wildflowers.

Salvage of forest products resulting from wildland fire, prescribed fire, forest insects and disease, weather induced or other forest mortality events would be considered.

Timber salvage project areas would consist of small openings, thinning between openings, and retention patches. In the context of large-scale wildland fire or forest insect and disease outbreaks, patches of dead and dying forest would be maintained for wildlife dependent upon this habitat.

In all areas with dead and dying trees (including retention patches), tree cutting would be allowed for human safety, fire rehabilitation and stabilization, and forest or stream restoration activities.

Silvicultural prescriptions would be consistent with accepted methods related to site, species, habitat types, and the individual requirements of the forest stand. Tractor logging generally would be limited to slopes with average gradients of less than 40 percent and the season of logging would be limited to reduce soil compaction and rutting (**Appendix E – BMPs**).

Adequate access would be maintained for management activities and treatments. Road locations would be determined on the basis of topography, drainage, soil type, and other natural features to minimize erosion. Skid roads would be rehabilitated by appropriate methods that

disperse runoff, reduce erosion, and promote revegetation as needed.

Slash disposal would be conducive to revegetation and advantageous to the passage of big game. Slash would be burned when necessary. All mechanical and prescribed burn treatments would be in conformance with Best Management Practices (see **Appendix E –BMPs**).

Mechanical treatments would be laid out to minimize the risk of windthrow, and shelterwood harvests would be made to improve genetic composition of the regenerated stand. Whenever possible, openings larger than 20 acres in size resulting from forest treatment or large scale events in forested habitats would be planted when natural regeneration does not become established to desired levels within 15 years or cannot be reasonably expected in five to fifteen years.

### *Riparian*

At the Field Office scale, management would restore and improve riparian areas and wetlands. Riparian areas that are functioning at risk would be a high priority for restoration.

Authorized activities within riparian areas would strive to maintain and restore riparian structure and function, benefit fish and riparian-dependant species, enhance conservation of organisms that depend on the transition zone between upslope and the stream, and maintain or improve the connectivity of travel and dispersal corridors for terrestrial animals and plants. When projects that cause detrimental effects on riparian resources cannot be located outside of riparian areas, short-term and long-term effects would be minimized.

Streams and riparian habitats that have been degraded or lost due to the effects of historic mining operations, including placer mining, would continue to be restored to improve water quality as well as aquatic and riparian habitats. The BLM HazMat/AML Program(s) would continue to cooperatively work on a watershed-by-watershed basis reducing exposures to human health and the environment from AML sites. Reclamation of these areas typically include; removing contaminated soils and tailings, preventing run-off of heavy metals, reconstructing/stabilizing streambeds and banks (including providing habitat features such as down woody material and planting or restoring riparian vegetation), reducing sedimentation, closing physical safety hazards, and closing/stabilizing roads. Following reclamation, sites would be monitored to evaluate if the reclamation risk reduction project goals were achieved, if additional restoration efforts are necessary to restore or improve aquatic and/or riparian habitats and the effectiveness of the project(s) to determine if a viable fishery has been or could be established.

Forested riparian habitats would be managed to accelerate the development of mature forest communities to promote shade, bank stability, and woody debris recruitment. Late-successional riparian vegetation would be promoted in amounts and distribution similar to historic conditions.

Riparian and wetland management would be consistent with all state and federal laws and regulations. Actions would be taken to cooperatively conserve riparian/wetland habitat, minimize the impacts, loss or degradation of wetlands, and preserve values served by floodplains where occurring on public land while reducing hazards to human safety.

Site specific objectives and management strategies would be developed and applied through activity plans to meet the Standards for Rangeland Health. (**Appendix F – Land Health Standards**) Riparian protection would be provided by the Montana Streamside Management Zone Law (77-5-301 through 307 MCA). Streamside Management Zones (SMZs) provide regulation for the protection of water quality. Within SMZs, there are specific restrictions on certain forest activities, including; timber harvest design, timber cutting and removal (including clearcutting), the use of heavy equipment, slash disposal, broadcast burning, off-road vehicle operation, and road construction (unless necessary for stream crossing). SMZs also address the handling, storage, application, or disposal of hazardous or toxic substances. The SMZ is defined as "the stream, lake, or other body of water and an adjacent area of varying width where management practices that might affect wildlife habitat or water quality, fish, or other aquatic resources need to be modified." The SMZ encompasses a strip at least 50 feet wide on each side of a stream, lake, or other body of water, measured from the ordinary high water mark, and extends beyond the high water mark to include wetlands and areas that provide additional protection in zones with steep slopes or erosive soils. The SMZ provides the minimum regulatory standards for forest practices in riparian areas.

Ephemeral drainages and some mapped intermittent streams would not be covered by the SMZs under the definitions in the state regulations. These areas, however, could be covered by management restrictions commonly known as Best Management Practices (**Appendix E – BMPs**). Consistent with the SMZ law, forest and fuel management activities would be allowed in the riparian ephemeral areas and intermittent stream areas to meet riparian restoration or maintenance objectives and only if adequate woody material remains in the riparian area. In these situations, forest management activities would follow BMPs.

Riparian communities, habitat, and associated uplands would be treated and restored through implementation of livestock grazing guidelines to meet Rangeland Health Standards, as well as AML reclamation.

### *Livestock Grazing*

Objectives for livestock grazing would be to meet the Standards for Rangeland Health and Guidelines for

Livestock Grazing Management Butte District section of the publication *Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Montana, North Dakota, and South Dakota*, BLM (1997), which would be incorporated into livestock grazing permits and leases.

Allotment Management Plans and Coordinated Resource Management Plans would continue to be implemented, including utilization objectives and associated range improvement projects.

Land Health Standards would be used with Best Management Practices for livestock grazing that meet or exceed those approved by the State of Montana in order to maintain, restore, or enhance water quality when authorizing grazing along with site-specific vegetation objectives.

Cooperatively managed allotments with the USFS, Missoula, and Dillon Field Offices would continue under existing Memoranda of Understanding. Cooperative management of the Bull Mountain Game Range would continue with the USFS.

Applications for unleased allotments and vacant available lands (areas of land not segregated into allotments open to leasing by qualified applicants) would be considered on a case-by-case basis.

Existing utilization objectives set through interdisciplinary NEPA, Allotment Management Plan, or Coordinated RMP planning processes would continue in effect.

Adjustments to livestock management practices or livestock numbers, including increases or decreases, would be made based on results of monitoring studies, rangeland health assessments, allotment evaluations, and interdisciplinary review.

The health and integrity of riparian areas and wetlands would be maintained and improved by using tools such as livestock fencing, alternate upland water sources or livestock grazing adjustments (timing and stocking rates).

Functional wildlife escape ramps would be installed and maintained on all water tanks on BLM lands.

Grazing practices in riparian areas (accessibility of riparian areas to livestock, length of grazing season, stocking levels, timing of grazing, etc.) that retard or prevent attainment of riparian goals or proper functioning condition would be modified. Where livestock grazing is the cause of degraded conditions, grazing would be suspended on a case-by-case basis if adjusting practices is not effective in meeting riparian goals or proper functioning condition.

New fences would be built to standard BLM wildlife specifications to allow wildlife passage, with the exception of fences built specifically to keep ungulates out of an area or fences built to meet specific public safety or other administrative purposes. Existing fences not meeting standard BLM wildlife specifications would be modified to meet the standard when reconstruction is done.

Wildlife habitat, grassland, sagebrush, and shrubland health of individual allotments would be assessed. Livestock grazing guidelines would be implemented to maintain or improve conditions when degradation due to grazing has been identified. Livestock grazing guidelines for residual cover and monitoring forage utilization in new or revised Allotment Management Plans would be developed.

No new term grazing permits would be authorized on river islands because of fencing issues, and to reduce conflicts between recreational use and grazing use as well as improving water quality.

Water developments for livestock generally would not be established in areas where significant conflicts for wildlife forage and habitat could occur.

Range improvements generally would be designed to achieve both wildlife and range objectives.

Sufficient forage and cover would be provided for wildlife on seasonal habitat.

### *Wildland Fire Management*

The Beaverhead-Deerlodge National Forest, Helena National Forest, Gallatin National Forest, and the State of Montana DNRC would implement fire preparedness, prevention, and suppression on BLM administered lands through the interagency offset and six party fire protection agreements.

Use of retardant in Wilderness Areas or WSAs would be avoided and would require line officer approval.

Use of heavy equipment would be restricted to areas outside of Wilderness or WSAs.

Minimum Impact Suppression Tactics would be used when working in a Wilderness Area or WSAs, following the Interim Management Policy and Guidelines for Lands under Wilderness Review (BLM Handbook H-8550-1).

BLM would manage naturally ignited wildland fires in the Elkhorn Mountain units under the prescription guidelines established in the Elkhorn Mountains Fire Management Plan.

Fire Management activities (wildland fire, fuels, and fire mitigation, education and prevention) would be prioritized by their risk of life and property across the Planning Area. Fires that are adjacent to or near WUI would have highest priority for fire suppression.

Fire management activities would be designed and implemented in a manner that meets, or moves toward meeting Land Health Standards. Wildland fire management activities would be conducted to meet or move toward meeting Land Health Standards when compliant with the standards for fire operations.

Planned prescribed fire unit size would be determined by an interdisciplinary team through site specific NEPA analysis.

BLM would use the BLM's Emergency Fire Rehabilitation Handbook (H-1742-1) outlining the process for implementing emergency fire rehabilitation projects following wildland fires and wildland fire use.

Emergency fire rehabilitation funds may be used to:

- Protect life, property, and soil, water and vegetation resources;
- Prevent unacceptable onsite or offsite damage;
- Facilitate meeting land use plan goals and other Federal laws; and
- Reduce the invasion and establishment of undesirable or invasive vegetation.

Incident bases, camps, helibases, staging areas, and other incident management activities would be located outside of riparian areas. If unavoidable, an exemption could be made by a resource advisor.

BLM would implement management actions that maintain or move plant communities to the historic fire regime and condition classes. In areas where the environment has changed substantially and a return to historic conditions is not possible or ecologically desirable, the appropriate fire regime would be determined based on current management.

Following large wildland fires, burned areas would be evaluated for appropriate biological, salvage, and physical rehabilitation activities.

Provide assistance to communities in developing and maintaining community wildland fire protection plans.

In all alternatives, fire management objectives would be associated with Fire Management Units (FMUs). The Planning Area would be divided into FMUs and BLM lands would be designated into fire management categories described below.

### Category A Areas

Wildland fire is not desired in these areas. The fire management emphasis should be placed on prevention, detection, rapid response, use of appropriate suppression techniques and tools, and non-fire fuels treatments. Fire suppression may be required to prevent unacceptable resource damage or to prevent loss of life or property. Emphasis would be focused on those actions that would reduce unwanted ignitions and reduce losses from unwanted wildland fire.

### Category B Areas

These are areas where unplanned fire (natural or human-caused) is likely to cause negative effects, but these effects can be minimized or avoided through fuels management (e.g., prescribed fire), prevention of human caused fire, or other strategies. Prevention and mitigation programs to reduce unwanted fire ignitions and resource threats would be emphasized. Fire suppression would be the objective for unplanned wildland fire. Fire and non-fire fuels treatments reduce the effects of unplanned wildland fire. Restorative treatments would consist of multiple non-fire treatments before the use of fire would be considered.

### Category C Areas

These are areas where wildland fire use and prescribed fire is desired to manage ecosystems but there are substantial constraints that must be considered for its use. These constraints would include critical wildlife habitat, air quality, or Threatened and Endangered species. Resource consideration would be described in terms of maximum acreage, time of year or burned acres per decade from all types of fire. These areas would receive lower suppression priority in multiple wildland fire situations. Fire and non-fire fuels treatments would be utilized to ensure constraints are met or to reduce any hazardous effects of unplanned wildland fire.

### Category D Areas

These are areas where fire is desired, with no constraints associated with resource condition or social economic or political consideration (i.e. where natural and management-ignited fire may be used to achieve desired objectives, such as to improve vegetation or watershed condition). These areas offer the greatest opportunity to use the full range of options available for managing wildland fire under the appropriate management response.

## *Noxious Weed Management*

BLM would manage Montana state and county designated noxious weeds and invasive plants according to the principles of Integrated Weed Management, Partners Against Weeds: An Action Plan for the BLM (USDI-BLM 1996b), Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States (USDI-BLM 2007), the Montana Weed Management Plan (Duncan 2005), the Noxious Weed Control Plan, Bureau of Land Management, Butte District, Headwaters Resource Area (USDI-BLM 1986b) or the most current BFO noxious weed control plan, and other applicable federal, state, and local laws, statutes, plans, and regulations.

BLM would continue cooperative agreements with County and State entities. Management efforts would be coordinated with other Federal, State, and County agencies, weed management areas, and private landowners and organizations.

Under all alternatives, BLM would focus prevention of weed spread along roads, trails, waterways, recreation sites, and disturbed sites due to project implementation.

BLM would continue to use a combination of cultural, physical, chemical, and biological treatments for weed control. Chemical and biological treatment techniques

would conform to BLM guidelines and state and federal laws.

Weed seed free forage would be used on BLM lands. Forage subject to this rule would include hay, grains, cubes, pelletized feeds, straw, and mulch.

Weed management prescriptions would be included in all new treatment projects and incorporated where possible in all existing contracts, agreements, and land use authorizations that would result in ground-disturbing activities.

Monitoring would be conducted to determine if weed treatment strategies are effective at the project level and Planning Area- and Decision Area-wide.

Approximately 10 to 15 percent of proposed weed treatment acres by alternatives are expected to be newly treated acres. Most of the treated acres would be repeated treatments on the same areas because successful weed control usually requires multiple treatments and/or combinations of treatment methods.

## Alternative A – No Action

### *Grasslands and Shrublands*

BLM would continue to assess the health of herbaceous and shrub species during rangeland health assessments with priority given to wooded riparian and upland broadleaf shrub communities. Fire restoration and rehabilitation standards would continue to be compatible with landscape resource management objectives and long-term (25-year) vegetation health protection and fuel management. Under Alternative A, the objective would be to treat approximately 5,250 acres of grassland and shrubland per decade, primarily to reduce conifer encroachment into these areas.

### *Forests and Woodlands*

The forestry program would continue to address forest stand management and development, as well as insect and disease detection and control. Forest stand harvesting and treatments would enhance or maintain healthy structure, density, species composition, pattern, and distribution to promote forest productivity and reduce the occurrence of forest disease and insect outbreaks. Forest stands would be managed to be resilient when periodic fire events occur and products would be salvaged from such events.

Forest and woodland treatment objectives under Alternative A would be as follows. Approximately 3,600 acres of dry forest types that are medium to large size with high tree densities would be treated per decade. Approximately 400 acres of treatments per decade would take place in similarly structured cool and moist forest types. Because the forest management program was not functioning at its present level until 1996, acreage estimates are based on forest management activities since 1996.

Thinning, forest product removal, and prescribed burning methods to reduce the amount of forest or wooded area with the potential for high severity wildland fire would continue. No mechanical treatments specifically targeting limber pine would occur.

Adequate access for management activities would be maintained. If needed, up to 5.5 miles of new, permanent roads could be constructed per year to provide access for treatments.

### Forest and Woodland Products

A full range of forest management activities, including timber production, would occur on high priority forest management areas, consistent with the Timber Production Capability Classification. Forest condition assessment activity plans or landscape analysis would be required. Landscape analysis may also be used to incorporate multiple resource considerations into general forest management activities.

Objectives for the Probable Sale Quantity (PSQ) would be at current levels of 12 million board feet (MMBF) per decade or 40,000 hundred cubic feet (CCF). This could range as high as 27 MMBF (97,000 CCF) per decade if forest treatments are increased up to 750 acres per year as allowed under the 1984 Headwaters RMP. All sales would be required to conform to guidelines developed in the Dillon Sustained Yield Unit Timber Management Plan (USDI-BLM 1977). BLM forest planners would continue to use information gathered through forest inventory, landscape analysis, and regeneration surveys to manage for production of forest products and initiate forest development and artificial reforestation projects.

A full range of forest management activities would occur on low priority forest management areas. Forest activity plans would continue to be adjusted for intensity with timber production a secondary consideration where other substantial resource values are identified. Public land within set-aside areas would generally not be harvested.

The Sleeping Giant, Scratchgravel Hills, and Muskrat Creek area within the Elkhorn Mountains would not be available for forest management activities.

The small sale program would continue to be permitted on forestland that is available for harvest. Occasional free use may be authorized to clean up concentrations of debris or to serve other public purposes such as education, material needs by public agencies or recognized charitable, non-profit activity support, provided the free-use materials are not later offered for sale by the receiving party. The forestry program would provide the estimated quantities of permits and products under the small sale program shown in **Table 2-23.**

Personal use firewood permits valid for wood collection from both BLM and Forest Service lands in Western Montana would continue to be offered by BLM in cooperation with the Forest Service.

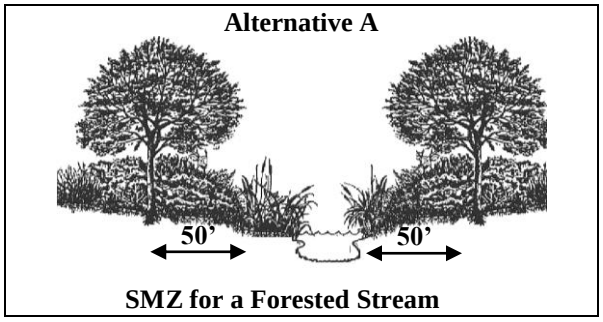
Removal of dead and down trees would be allowed for firewood gathering. Use of live trees for firewood gathering by the public or for commercial purposes would also continue under other BLM authorities, authorized on a case by case basis after review and compliance with NEPA.

The Silvicultural Guidelines and Harvesting Management Practices outlined below would continue.

- Roads constructed for timber harvests would be to minimum standards necessary to remove timber, unless the roads are needed for other public purposes requiring a higher standard.
- Forest activity plans would incorporate the Guidelines from the Montana Cooperative Elk Logging Study (Lyons *et. al*. 1985).
- Snag management would be implemented for cavity-nesting and denning habitat.
- The Elkhorns area would be managed as per the Elkhorn Mountains Landscape Analysis and the South Elkhorn Implementation Project Analysis. Timber harvest in the Elkhorn Wildlife Management Area (RMP management unit #36 in 1984 Headwaters RMP) in the Nursery Creek area would be allowed only for wildlife habitat improvement. This plan includes the following management objectives and guidelines:
    a. Management activities would be designed to maintain or improve elk, mule deer, and moose habitat, with primary emphasis on elk summer habitat and calving areas.
    b. Management activities would be designed to maintain or enhance opportunities for dispersed recreation, to the extent permitted by wildlife habitat objectives.
    c. The existing road network generally would remain open on routes designated in the Elkhorn Mountains Travel Management Plan. Seasonal restrictions may be imposed on forest treatment activities to minimize impacts on big game values and during elk calving season (April 15 to June 30).
    d. Timber harvest and prescribed burning may be used to improve wildlife habitat conditions. New roads needed for the removal of forest products would be kept to a minimum. New roads would be physically closed to public use following completion of forest management activities.
- Any subsequent management activities involving harvests of more than 250 MBF, construction of new access into roadless elk summer or fall range, or critical, crucial, or essential wildlife habitat would be coordinated with the Montana Department of Fish, Wildlife and Parks (MFWP).
- The approach used in developing the large scale salvage and restoration projects for the Bucksnort and Boulder Complex Wildfires of 2000 and the Landscape Analysis and South Elkhorn Implementation Project provides the framework for design and analysis of future emergency stabilization and forest restoration activities in other areas.
- Commercial forestland in areas with completed landscape analysis, the Boulder-Clancy, and the Marysville areas would be high priority for forest management. Special harvest restrictions would be applied in key elk seasonal use areas.

### *Riparian*

Riparian and wetland areas would be in properly functioning conditioning or would be moving toward properly functioning condition. Properly functioning condition includes; the presence of all age classes (seedling, sapling, pole, mature, decadent, and dead) of tree and shrub species where the potential exists, diverse composition of vegetation, species that indicate maintenance of riparian soil moisture, riparian plants with high vigor, adequate vegetative cover to protect banks and dissipate energy during high flows, and plant communities to provide for large woody material in streams and riparian areas.



**SMZ for a Forested Stream**

BLM would continue to implement projects to restore and improve riparian areas and wetlands. Up to 30 acres of riparian areas would be treated by burning or mechanical means per decade to improve vegetative conditions. (This treatment figure is a continuation of what has occurred, however the current plan allows treatment in all riparian areas subject to other management constraints.) Opportunities would be identified to minimize impacts or enhance riparian and wetland resources during project planning. Existing livestock exclosures along streams, wetlands, and riparian areas would be maintained as long as needed to meet management objectives.

Management actions within floodplains and wetlands would include measures to preserve, protect, and, if necessary, restore their natural functions.

BLM would continue to evaluate wooded riparian communities when conducting rangeland health assessments.

### *Livestock Grazing*

Livestock grazing would be allowed on about 278,000 acres. The amount of forage available on these lands would be 25,677 Animal Unit Months (AUMs). About 29,000 acres would not be available for livestock grazing. **Table 2-23** shows how the grazing availability in a number of allotments would vary by alternative. Grazing allotments are displayed on electronic maps (Grazing Allotment Map 1.PDF through Grazing Allotment Map 10.PDF) in the Grazing Allotment Maps folder on the enclosed compact disc. A table called Grazing Allotment Table.PDF, also enclosed in the same folder, can be used to cross-reference allotment numbers on the maps with allotment names in the table.

After the current permittee ceases livestock grazing, the McMaster Hills and Spokane Hills individual allotments would become vacant and available to qualified applicants per the grazing regulations. These allotments would be administered like all other existing allotments.

The existing Indian Creek allotment (2,215 acres and 376 AUMs) would be expanded up to an additional 5,566 acres and 700 AUMs by the Iron Mask Acquisition. The Indian Creek allotment would be available to qualified applicants per the grazing regulations. This allotment would be administered like all other existing allotments.

The Medicine Rock (Northeast Helena) riparian area would remain closed to livestock grazing and would not be available for prescription livestock grazing (authorized grazing use designed to accomplish a specific purpose. Controlling noxious weeds by grazing goats would be an example).

Allotments where grazing preference is relinquished (an allotment where an existing permittee or lessee gives up his or her grazing preference causing the allotment to become unleased) would remain available for livestock grazing leases or permits.

To reduce the potential for interactions between wild and domestic sheep, existing Instruction Memorandum 98-140 (USDI-BLM 1998b) would be followed to protect wild sheep. To minimize physical contact between domestic and wild sheep, buffer strips would be identified between new sheep and goat allotments as well as for those allotments with conversions from cattle to sheep and goats. Buffer strips may not be necessary or may be smaller where topographic features or other barriers exist that minimizes contact between wild and domestic sheep. Buffer strips could range up to 9 miles but the size could vary as developed through a cooperative agreement.

Rest from livestock grazing in vegetation treatment areas would be determined through site-specific interdisciplinary planning and NEPA processes.

Forage and cover requirements would be incorporated into allotment management plans and would be specific to areas of primary wildlife use.

Applications for unleased allotments and vacant available lands would be considered on a case-by-case basis.

### *Wildland Fire Management*

BLM would continue to manage vegetation under the Fire/Fuels Management Plan Environmental Assessment/Plan Amendment for Montana and the Dakotas (USDI-BLM, 2003a). Fire management categories and associated treatment acreages under the No Action Alternative are presented in **Table 2-1** and **Map 2**.

**Table 2-1**
**Alternative A Fire Polygons**

| FMU | Category[1] | BLM Acres[2] |
|---|---|---|
| Absoraka Foothills | C | 3,900 |
| Big Belt Mountain | C | 7,200 |
| Big Hole River Corridor | C | 11,100 |
| Blackfoot (See Missoula FO) | C | 0 |
| Boulder River | B | 14,300 |
| Clancy/ Marysville | C | 28,200 |
| Elkhorn Mountains | C | 68,900 |
| Fleecer Mountain | C | 18,100 |
| McCartney/ Rochester | C | 28,100 |
| North Hills | B | 6,300 |
| Pipestone | C | 41,000 |
| Scratchgravel Hills | B | 7,900 |
| Sleeping Giant/ Sheep Creek | C | 20,500 |
| Spokane Hills and North | B | 6,800 |
| Three Forks | C | 31,200 |
| Wise River Town site | B | 1,400 |
| Bozeman/Livingston Scattered Tracts | A | 7,300 |

[1] Category and associated treatments only apply to BLM land within each zone.

[2] Acres are approximate and rounded to nearest 100.

BLM would continue to manage the fire program to control all wildland fires burning on or threatening public land within the first burning period. Modified fire suppression areas would continue to be based on values at risk, fire behavior, fire occurrence, beneficial fire effects including reduction of fuel loading, fire suppressions costs, and consistency with other agency plans and policies. Appropriate fire suppression actions would be implemented in the WUI and areas identified as possessing significant values that could be significantly altered by wildland fire.

Wildland fire use would continue to be allowed in areas identified as being acceptable in the Fire Management Plan, where there are approved wildland fire use plans

(Elkhorn Mountains), or upon completion of approved wildland fire use plans. The Elkhorn Mountains Fire Management Plan would be kept under current guidance.

### *Noxious Weed Management*

All grazing allotment agreements for the Planning Area would continue to address weed control by chemical treatment and adjusting livestock use in response to reduced forage availability.

Weeds would continue to be treated near roads and trails, urban interface and recreation areas. Areas currently under a multi-year treatment plan would continue to be treated. Treatments would include a combination of cultural, chemical, and biological treatments for weed control.

Under Alternative A, the objective would be to treat an estimated 20,000 acres of weeds per decade, not including biocontrol measures such as insect releases, grazing, or use of pathogens.

## Management Common to Action Alternatives (B, C, and D)

### *Grasslands and Shrublands*

When necessary, sagebrush and grassland distribution and vigor would be restored through vegetative treatments such as reducing conifer encroachment, reducing noxious weeds, and ensuring proper grazing practices (season or use or intensity).

Management of sagebrush habitats will be a priority based on concerns over the conservation status of sage grouse, pygmy rabbit, and other species associated with sagebrush and grassland habitats.

The current acres of shrublands and grasslands shown by major watershed in **Table 2-23** at the end of this chapter are approximations with built-in limitations associated with distinguishing between these two habitat types during mapping. The current and proposed treatment acres of these two habitat types were separated to provide an indication of the relative amount of these habitats. However, due to the limitations in mapping these habitat types, the total number of shrubland and grassland acres proposed for treatment by alternative should be considered in combination. Objectives for proposed treatment acres include only those acres that would be treated to reduce conifer encroachment.

Under the action alternatives, an objective would be to treat up to 850 acres of crested wheatgrass seedlings, agriculture fields, and weed infestations in the McMasters and Ward Ranch acquisitions to convert their communities from non-native vegetation to native vegetation.

### *Forests and Woodlands*

Forest and woodland health assessments would be incorporated into Land Health Standards at the activity plan level to determine forest health conditions in project areas. Forest health is defined as the degree to which the biological and physical components of forest stands and their associated ecosystems and relationships are present, functioning, and capable of self-renewal.

Natural disturbance regimes would be maintained or mimicked so that plant communities are resilient when periodic outbreaks of insects, disease, and wildland fire occur.

Vegetation planning would be coordinated with managers of federal or state lands adjacent to site-specific proposals for a collaborative approach.

Vegetation manipulation projects would be designed to minimize impacts to wildlife habitat and improve it when possible.

To maintain site productivity (organic matter and nutrients), provide for special wildlife features, and discourage cross-country motorized travel, much of the fine materials not utilized (seedlings, saplings, tops, and branches less than 4 inches in diameter, cull logs and identified down woody material) would be left scattered on the forest floor where it would not contribute to ladder fuels.

Forest management would emphasize old forest structures, snag management, and large diameter trees for cavity nesters where appropriate. Existing and developing old forests would be retained and protected from uncharacteristically severe natural disturbances such as; stand replacing wildland fire, and insect and disease epidemics.

The BLM would strive to maintain and/or restore stands with old forest structure within historic range of variability to maintain and/or enhance habitat for old growth dependent species.

BLM would design fire restoration/rehabilitation standards on a case-by-case basis, compatible with landscape resource management objectives and long-term (25-year) vegetation health protection and fuel management.

### Forest and Woodland Products

In all action alternatives, commercial harvest of forest products would normally be associated with vegetative restoration (including forest health) and fuels treatments and would be designed to meet objectives for forest management, wildlife habitat management, fire hazard reduction, hazard tree removal, special status species management, visuals, recreation, and travel management.

Raw material for a variety of forest products would be made available in all alternatives.

Special forest and range products would be managed according to sustainability limits and where consistent with other resource management objectives. These products would be harvested under the appropriate written, BLM approved authorization only.

Residual stands left by disturbance events would be maintained to provide for natural regeneration and diversity of forest systems.

### *Riparian*

Riparian areas would be managed to provide the amount and distribution of large, woody material characteristic of natural aquatic and riparian ecosystems. Trees may be felled in riparian areas when they pose a safety risk or are needed to enhance riparian function/condition. Felled trees would be kept on site when needed to meet woody debris objectives.

Riparian and wetland areas would be assessed and monitored for proper functioning condition and other specific objectives, by using proper functioning condition and/or other appropriate stream survey methodologies. For proper functioning condition in streams, entrenchment, width/depth ratio, sinuosity, channel substrate, and slope should be within the range identified for channel types.

BLM would cooperate with federal, tribal, and state wildlife management agencies and private landowners to identify activities that prevent meeting riparian standards. In cooperation with those agencies, projects or management measures would be designed to minimize impacts.

Mechanical or hand cutting and/or prescribed burning would be used to remove competing conifers from riparian ecosystems, including aspen clones. Commodity removal of juniper would be encouraged.

### *Livestock Grazing*

For allotments without specific management objectives set through an interdisciplinary planning process, the utilization objective as measured at the end of the grazing season would be 55 percent on non-native seedlings and 45 percent on native herbaceous forage plants, on a pasture average basis. (These utilization percentages would maintain or enhance most plant communities found in the Decision Area to achieve or make progress toward meeting Rangeland Health Standards.) Lower or higher utilization objectives may be acceptable when set through an interdisciplinary planning or NEPA process to achieve resource objectives.

Grazing uses on lands proposed for acquisition would be considered on a case-by-case basis based on the values identified for the acquisition.

No new kind of livestock conversions from sheep or cattle to horses would be allowed on existing allotments smaller than 160 acres. No new horse permits or leases would be offered on available vacant parcels less than 160 acres in size. Exceptions may be granted in rare cases of intermingled ownership where rangeland health standards are met.

BLM would develop and implement appropriate grazing strategies in grizzly bear distribution zones.

### *Wildland Fire Management*

Any wildland fire that is eligible for Wildland Fire Use (WFU) will require a site-specific Wildland Fire Implementation Plan (WFIP) before it can be managed as such.

Fire Management Unit (FMU) boundaries are based on watershed boundaries. In each action alternative more FMUs are created within the watershed boundaries to take in consideration for known areas of wildland urban interface.

Priority of fire management activities would be placed on fuels reduction in WUI areas in conjunction with completed Community Wildfire Protection Plans.

Fire management activities outside of the WUI areas would use Fire Regime, Condition Class (FRCC) to determine level of fuels treatments.

Fire management would focus on maintaining fire dependent ecosystems and restoring or maintaining those areas outside their natural balance through mechanical, chemical, and/or prescribed fire treatments.

For all prescribed fire projects, BLM would evaluate habitat type, soils, fuel conditions, project objectives, and risk when determining seasonality for burning.

Spread of non-native invasive aquatic species as well as additional resource values would be addressed in the Butte Field Office Fire Management Plan to be revised after finalization of this RMP.

### *Noxious Weed Management*

Noxious weed control using domestic sheep and/or goats in occupied bighorn sheep habitat would be prohibited.

Treatments using biological controls (including but not limited to grazing, insect releases, and pathogens) which have been documented to damage existing desired plant or wildlife species would be prohibited.

BLM would actively conduct noxious weed outreach and education for BLM personnel, public land users, and the general public. Outreach and education would consist of identification, prevention and control methods, and the benefits of restoration.

BLM would encourage the development of weed management areas where the landowners and users are cooperatively working to manage noxious weeds within designated areas.

Where applicable, plant communities would be restored to promote resistance to weed invasion, using accepted management techniques, methods, and procedures.

All contractor and BLM equipment would be power-washed to remove weed seed before entering ground disturbing project areas.

## Alternative B – Preferred Alternative

### *Grasslands and Shrublands*

Priority areas for treatment would include big game winter range, sagebrush, bighorn sheep habitat, and the Wildland Urban Interface.

Objectives for treating grasslands and shrublands under Alternative B are as follows. The total amount of grassland proposed for conifer reduction per decade would be 2,750 to 11,800 acres. The total amount of shrubland proposed for conifer reduction per decade would be 1,000 to 3,650 acres. These acres are displayed by major watershed in **Table 2-23**.

Native or low impact, non-invasive seed mixtures would be used when restoring vegetation on disturbed ground.

### *Forests and Woodlands*

For the action alternatives, Forests and Woodlands are further subdivided into dry forest types, cool and moist forest types, late and old structure forest, while forest products includes a subheading for timber salvage.

#### Dry Forest Types

The objective for total amount of dry forest treatments per decade under Alternative B would be 4,150 to 14,750 acres. These acres are displayed by major watershed in **Table 2-23**.

Restoration priorities would include dry forests with medium to large sized trees, with high tree densities. In dense, old, and mature Douglas-fir and ponderosa pine forests, stand density would be moved toward stands that consist of fewer trees per acre with a larger average diameter. Over time, treatments would produce a variety of stands with more open canopies of multiple age groups of native conifers and healthy and more diverse shrub, grass, and forb understories. A range of 3,350 to 10,750 acres per decade of medium to large sized tree-dominated stands of this forest type would be treated under Alternative B (subset of objective for total acreage treatments). Historically, these habitat types were more open "savannah" forests interspersed with grassland and shrubs. Dry forest stands that are in an ecologically "healthy" condition which can sustain the growth of the larger trees while successfully reproducing and maintaining the juvenile growth of the younger trees would also be maintained under Alternative B. Treatments would promote the large, overstory trees and natural regeneration that would provide diverse age and size classes. Maintenance of existing dry forests would be considered "moderate priority" with 400 to 2,000 acres per decade anticipated for treatment (subset of objective for total acreage treatments).

Under Alternative B, these treatments could also include thinning in limber pine, dry forest habitats amounting to approximately 100 to 1,000 acres per decade, and approximately 300 to 1,000 acres per decade of small diameter thinning of seedling/sapling and pole sized conifer stands.

The majority of ponderosa pine, dry forest treatments would occur in the Upper Missouri Watershed.

#### Cool and Moist Forest Types

Cool and moist forest types would be treated when necessary to maintain or improve stand conditions. Restoration of these habitat types may also be done to meet desired future conditions for ecosystem function and diversity as well as for wildlife habitat including creating forage for lynx in lodgepole pine forests.

The objective for total amount of cool and moist forest treatments per decade under Alternative B would be 450 to 3,750 acres. These acres are displayed by major watershed in **Table 2-23.**

Approximately 350 to 3,350 acres of stands dominated by medium to large sized trees, with high tree density in cool and moist forest would be treated in this alternative (subset of objective for total acreage treatments). Small diameter thinning would also occur on approximately 100 to 400 acres per decade in seedling/sapling and pole size cool and moist Douglas-fir and lodgepole pine forests.

Treatments in cool and moist forest types would include the creation of openings to allow for regeneration of lodgepole pine and Douglas-fir. Areas may also be pre-commercial or commercially thinned. Commercial products such as timber and biomass would be produced from these treatments.

Treatment in cool and moist forest types would be considered a low to moderate priority under Alternative B. The priority watershed for implementation of treatments in cool and moist forest is the Big Hole.

#### Old Forest Structure

Alternative B would provide direction to maintain and promote old forest structure and conditions through active treatments and restoration activities. Actions would be designed to develop and maintain stand structures that are relatively complex with highly variable tree densities, healthy and diverse understory composition, and abundant snags and downed logs. Where deficient on the landscape, snags and down woody material would be created in appropriate areas.

#### Forest and Woodland Products

The objective for quantities of forest products (PSQ) are based on the expected amount of treatment acres (including the WUI projects) and would be 33,000 to 91,000 CCF or 9 to 25 MMBF per decade under Alternative B.

Some new permanent roads may be built for long-term management of areas where multiple entries would be necessary to meet objectives. New and temporary road construction would be kept to a minimum. Temporary roads would be decommissioned (route would be closed and rehabilitated to eliminate resource impacts such as erosion, and is no longer useable for public or administrative uses) within one year of project completion. In addition, replacement, maintenance, or decommissioning of existing roads to meet transportation planning and management objectives could also occur during forest product removals or stewardship treatment projects conducted under Alternative B.

The small sale program (estimated quantities of permits and products shown in **Table 2-23)** would maintain the current types of activities as well as the development of treatment areas to help meet public demand for small sale products. The small sales would only occur where sufficient physical access currently exists. No new permanent roads would be constructed to meet the demands of the small sale program.

Personal use firewood permits valid for wood collection from both BLM and Forest Service lands in Western Montana would continue to be offered by BLM in cooperation with the Forest Service.

Unless specifically designated, only standing dead and dying wood would be allowed to be taken as firewood. The BLM, however, could designate specific areas for firewood cutting of live trees to meet other resource objectives or BLM authorized uses such as leases and rights-of-way.

To protect existing snag habitat for wildlife, no dead trees greater than 24 inches DBH would be allowed to be cut for firewood. Firewood cutting would not be allowed in WSAs.

Firewood cutting would not be allowed within 100 feet of live (yearlong flow) streams or within 50 feet of intermittent streams.

Timber Salvage

Numerous bird and mammal species require dead and dying forests for maintenance of viable populations. Methods of salvage that "homogenize" a stand such as selective removal of all trees of a certain size (usually a size required by disturbance dependant species), density and/or species would not maintain the structure or variety of microclimates required by bird and mammal species that use this type of habitat. When salvage is proposed in dead and dying forests, contiguous acres of undisturbed standing and down woody material would be retained in adequate amounts for those wildlife species that depend on this type of habitat.

Outside of the contiguous areas identified for retention, harvest treatments may include: 1) forest openings appropriate for the site and retention patches of uncut dead and dying trees; or 2) forest openings appropriate for the site with selective thinning between openings and retention patches of uncut dead and dying trees; or 3) selective thinning and retention patches of uncut dead and dying trees.

Bark beetle suppression treatments, which may target large tree removal, would be permitted to contain outbreaks and to reduce the risk to other forest stands in the vicinity.

### *Riparian*

At the Field Office scale, Alternative B would maintain, protect, and/or restore aquatic and riparian-dependent terrestrial resources. The emphasis in Alternative B would be to actively restore riparian habitats.

### Riparian Management Zones (RMZs)

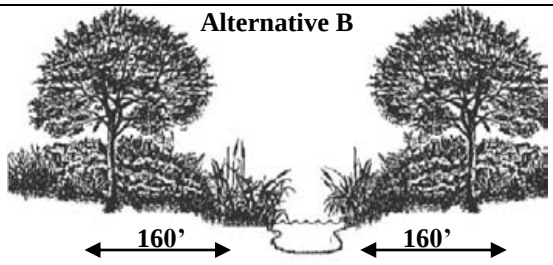
Riparian Management Zones are areas where riparian values would receive primary emphasis with all activities to the extent possible. Maintaining and restoring quality riparian habitat (including vegetation) is important for many wildlife species as well as to maintain water quality, appropriate woody material, and nutrient routing to aquatic habitats, and to maintain appropriate stream channel morphology.

Riparian Management Zones are intended to: maintain and restore riparian structures and functions; benefit fish and riparian-dependent resources; enhance conservation of organisms that depend on the transition zone between upslope and aquatic habitats; and improve connectivity of travel and dispersal corridors for terrestrial animals and plants, and aquatic organisms.

In addition to adhering to SMZ Law, Riparian Management Zones from the edge of the aquatic habitat would be established as follows.

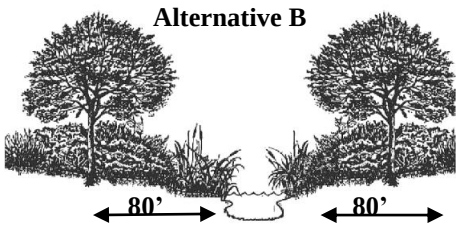
Forested Areas

Streams, lakes, ponds, and reservoirs containing fish: The riparian management zone (RMZ) would consist of the water body and a zone located on all sides of the water body. This zone would extend from the outer edges of the bankfull channel, full pool, or adjacent wetland a distance equal to the height of two site-potential trees. (Site potential tree height – within forested areas, a site potential tree height would be the average maximum potential height of dominant trees, in the riparian management zone).




**RMZ for a Forested, Fish bearing Stream**
Assumes an 80' height site potential tree

Perennial non-fish bearing streams: The RMZ would consist of the stream and a zone located on both sides of the channel. This zone would extend from the outer edges of the bankfull channel (or adjacent wetland) a distance equal to one site-potential tree height.



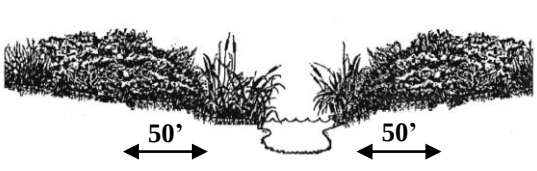

**RMZ for a Forested, Perennial, Non-Fish bearing Stream**
Assumes an 80' height site potential tree

Non-fish bearing ponds, lakes, reservoirs, or wetlands greater than 1 acre: The RMZ would extend from the outer edge of the full pool or wetland a distance equal to one site-potential tree height or to the edge of seasonally saturated soil or wetland vegetation, whichever is greater.

Intermittent streams and wetlands less than 1 acre: The RMZ would consist of the water body and a zone located on all sides of the water body. This zone would extend from the outer edges of the bankfull channel or adjacent wetland a distance equal to at least 50 feet.

Non-forested Areas

For fish-bearing and non-fish bearing streams, lakes, ponds, and reservoirs, the RMZ would consist of the water body and a zone located on all sides of the water body. This zone would extend from the outer edges of the bankfull channel (average high-water mark), full pool, or adjacent wetland a distance that encompasses the active floodplain. The RMZ would extend 50 feet above the break in slope leading down from the lowest terrace to the floodplain, or in segments where trees are present, to a distance equal to one site-potential tree height from the edge of the feature, whichever is greatest.




**RMZ for a Non-Forested, Perennial Stream**

For intermittent streams and wetlands less than 1 acre, RMZs would be 50 feet from the edge of wetland vegetation or active stream channel as indicated by riparian vegetation, saturated soil, or water. The criteria for selecting the width may be different for each side of the water body. Riparian livestock use and vegetative treatment would occur under Alternative B within RMZs. The condition and importance of riparian resources to natural systems locally would serve as primary emphasis for management activities and uses. At the Field Office scale, projects in RMZs would generally be designed to protect or restore the ecological function of riparian areas and streams.

Because stream types and riparian functions significantly vary across the Planning Area, RMZs based on a minimum linear distance would not be applicable for every project. Although the minimum distances would always apply, the width necessary to protect the stream and riparian structure and function may be wider than the minimum distances and would be determined from site-specific analysis.

Each project would incorporate specific design features to maintain the key ecological function of the Riparian Management Zones.

The objective for total amount of riparian vegetation habitat proposed for mechanical and/or prescribed burning treatments per decade under Alternative B would be 200 to 700 acres (this includes vegetative treatments and not changes in grazing practices). These acres are displayed by major watershed in **Table 2-23**.

Commercial timber harvest would be allowed in Riparian Management Zones to meet riparian restoration or maintenance objectives and only if adequate woody material remains in the riparian area to meet site-specific (project level) riparian objectives.

Where the primary project objective is aspen restoration, treated aspen stands would be fenced from livestock and wildlife when recovery could be suppressed by grazing and browsing. Fencing could consist of using native, on-site materials as barriers. All fences (with the exception of barriers created from native, on-site materials) would be maintained and removed within 10 years or when the aspen is fully re-established or recovered.

### *Livestock Grazing*

Livestock grazing would be allowed on about 270,000 acres of public land. Approximately 37,000 acres of public land would be unavailable for grazing permits or leases (**Table 2-2**). (The allotments unavailable for grazing permits are unleased at this time generally because they lack forage or water, are small, are on steep terrain, are covered with timber, are adjacent to subdivisions, or lack infrastructure.) The amount of forage available on these lands would be 24,710 AUMs active use and 1,312 AUMs forage reserve, temporary non-renewable AUMs.

After the current permittee ceases livestock grazing, the McMaster Hills and Spokane Hills individual allotments would be established as forage reserve allotments (An allotment without a term grazing permit that is grazed on a temporary nonrenewable basis. This type of allotment

**Table 2-2**
**Grazing Availability For Special Allotments Varying By Alternative**

| Allotment Name | Allotment Number | Alt. A | Alt. B | Alt. C | Alt. D |
|---|---|---|---|---|---|
| Indian Creek | 20233 | Available for grazing permit | Forage Reserve Allotment | Unavailable for grazing permit | Available for grazing permit |
| Spokane Hills | 7720 | Available for grazing permit | Forage Reserve Allotment | Forage Reserve Allotment | Available for grazing permit |
| McMasters Hills | 7721 | Available for grazing permit | Forage Reserve Allotment | Forage Reserve Allotment | Available for grazing permit |
| Centennial Gulch | 7715 | Available for grazing permit | Unavailable for grazing permit; prescription grazing | Unavailable for grazing permit; no prescription grazing | Available for grazing permit |
| Free Coinage | 20254 | Available for grazing permit | Unavailable for grazing permit | Unavailable for grazing permit | Available for grazing permit |
| Alder Creek | 351 | Available for grazing permit | Unavailable for grazing permit | Unavailable for grazing permit | Available for grazing permit |
| Charcoal Mountain Cust. | 10363 | Available for grazing permit | Unavailable for grazing permit | Unavailable for grazing permit | Available for grazing permit |
| Dickie | 20364 | Available for grazing permit | Unavailable for grazing permit | Unavailable for grazing permit | Available for grazing permit |
| Dog Paw | 20365 | Available for grazing permit | Available for grazing permit | Unavailable for grazing permit | Available for grazing permit |
| Maiden Rock Custodial | 20367 | Available for grazing permit | Unavailable for grazing permit | Unavailable for grazing permit | Available for grazing permit |
| Quinn Creek | 5487 | Available for grazing permit | Unavailable for grazing permit | Unavailable for grazing permit | Available for grazing permit |
| Sixmile Park County | 5507 | Available for grazing permit | Available for grazing permit | Unavailable for grazing permit | Available for grazing permit |
| Wineglass Mountain | 15452 | Available for grazing permit | Unavailable for grazing permit | Unavailable for grazing permit | Available for grazing permit |

would be used to provide temporary grazing to rest other areas following wildfire, habitat treatments, or to allow for more rapid attainment of rangeland health). Forage reserve allotments would be managed to meet, or move toward meeting, land health standards. Use would be authorized on a temporary, nonrenewable basis. The amount of use would be determined by the BFO. Applicants would be required to meet qualifications per the grazing regulations, and show the ability and commitment to repair and maintain improvements and infrastructure. The BFO would rank qualified applicants according to the following criteria in priority order:

1. Implementing projects or vegetation management on BLM lands.
2. Facilitating a change in management to improve resource conditions on BLM allotments.
3. Accommodating permittees or lessees displaced by natural causes (i.e. wildland fire, drought, insect infestations, etc.)

The criteria found at 43 CFR §4130.1-2 (USDI-BLM 2006a) will be used to determine priority when conflicting applications are submitted.

The existing Indian Creek allotment would be expanded up to 5,566 additional acres and 700 AUMS by the Iron Mask acquisition. The allotment located in the Elkhorns Cooperative Management Area would be managed as a forage reserve allotment. The allotment would be managed to meet, or move toward meeting, land health standards. Use would be authorized on a temporary, nonrenewable basis. The amount of use would be determined by the BFO. Applicants would be required to meet qualifications per the BLM grazing regulations, and show the ability and commitment to repair and maintain improvements and infrastructure. The BFO would rank qualified applicants according to the following criteria in priority order:

1. Be a State or Federal permittee or lessee, or private landowner within the boundaries of the Elkhorns Cooperative Management Area (ECMA).

2. Implementing projects or vegetation management on ECMA lands.
3. Facilitating a change in management to improve resource conditions on ECMA lands.
4. Accommodating permittees or lessees displaced by natural causes (i.e. wildland fire, drought, insect infestations, etc.)
5. The criteria found at 43 CFR §4130.1-2 (USDI-BLM 2006a) when conflicting applications are submitted.

The Centennial Gulch (Ward Ranch) allotment and Medicine Rock (Northeast Helena) riparian area would be available for prescription livestock grazing to meet specific resource objectives as determined through a site-specific interdisciplinary planning and NEPA process.

Allotments where grazing preference is relinquished would be evaluated for suburban/urban interface issues, critical wildlife habitat, riparian values, or recreational considerations before re-offering the grazing preference on the allotment for permit or lease.

Areas identified for prescribed burning would be rested from livestock grazing up to one year prior to treatment, if necessary, to produce fine fuels to carry the burn. Treatment areas would be rested for a minimum of two growing seasons following treatment to promote recovery of vegetation. Livestock rest for more or less than two growing seasons could be justified on a case-by-case basis.

Range projects would be maintained as long as needed to meet management objectives. Maintenance would be assigned to grazing permittees, other authorized public land users, or the BLM. Routine maintenance would be completed according to the maintenance schedule per the terms and conditions of existing cooperative agreements.

Under Alternative B, no change in livestock conversions from cattle to domestic sheep or goats would be allowed in allotments within occupied wild sheep habitat. New sheep and goat allotments or conversions from cattle to sheep or goats would be permitted a minimum of 5 miles from known bighorn sheep habitat. This distance would be greater if deemed necessary through site-specific analysis or a cooperative agreement with other federal or state agencies. Goats and sheep could be used for weed control on winter ranges when wild sheep are absent. To minimize contact with bighorn sheep, domestic sheep, and goats used for weed control would only be allowed to graze for up to 1 month near occupied bighorn sheep habitat and there would be a minimum buffer of 2 miles between domestic and wild sheep. Bedding grounds would be a minimum of 4 miles from known bighorn sheep habitat. The use of domestic sheep and goats would only be allowed from May 1 to July 31 unless coordinated with MFWP. A herder would be required to be on site at all times and be able to communicate with the BLM, the herd owner and MFWP. If bighorn sheep and domestic sheep and goats come into contact, the herder would be required to contact the BLM and MFWP immediately.

### *Wildland Fire Management*

BFO administered lands would be broken into nine FMUs. The FMUs would have B and C designations applied. Approximately 52,000 acres would be designated in category B and 255,000 acres in Category C (**Table 2-3** and **Map 3**). The FMUs follow watershed boundaries with the following two exceptions: The Missouri and the Big Hole watersheds would each be broken into two FMUs due to the urban interface areas surrounding Helena and Wise River. The Missouri watershed FMUs would be Central Missouri and Missouri, and the Big Hole watershed FMUs would be Big Hole and Wise River.

**Table 2-3**
**Alternative B Fire Polygons by Watershed**

| FMU | Category[1] | BLM Acres[2] |
|---|---|---|
| Big Hole | C | 51,000 |
| Blackfoot | B | 1,000 |
| Central Missouri | B | 37,000 |
| Gallatin | B | 2,000 |
| Jefferson | C | 82,000 |
| Missouri | C | 115,000 |
| Upper Clark Fork | B | 1,000 |
| Wise River | B | 10,000 |
| Yellowstone | C | 8,000 |

[1]Category and associated treatments only apply to BLM land within each zone.

[2]Acres are approximate and rounded to nearest 1000.

Fire management activities would correspond to the FMU designations. Management-ignited prescribed fire would not be conducted between May 1st and August 30th to protect nesting migratory birds unless breeding bird surveys document low potential impact to breeding birds.

In grassland and shrubland habitats, BLM would plan for prescribed burns that do not consume above-ground vegetation on more than 80 percent (on average) of each unit by surface area.

Delivery of chemical retardant, foam or additives to live streams would be avoided. Fish screens (1/8 inch diameter holes) on hoses would be required when removing water from fish bearing streams during fire management activities. Maps of fish bearing streams would be included in the BFO Fire Management Plan for use in initial attack of wildland fires.

### *Noxious Weed Management*

In addition to the priorities identified under Management Common to All Alternatives, prevention and control of

weed infestations in special designation areas and Weed Management Areas (areas with agreements between landowners to cooperatively manage for weeds) would be a high priority under Alternative B.

Under Alternative B, the objective would be to treat an estimated 21,000 to 50,000 acres of weeds per decade, not including biocontrol measures such as insect releases, grazing, or use of pathogens.

To minimize the risk of inadvertently spraying desirable riparian vegetation and waterways, aerial spraying of herbicides or pesticides would not occur when eye-level winds are greater than 6 miles per hour or within a minimum of 100 feet from streams or wetlands or in occupied or high value habitat for sensitive species of plants or animals. Aerial spraying would be conducted in a way that minimizes the effects on native forbs, grasses, and shrubs. Additionally, no herbicides or pesticides which may negatively affect sagebrush would be used aerially in sensitive sagebrush habitats. Standard operating procedures described in the Record of Decision for the Final Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement would be used.

To prevent special status plants from being sprayed with herbicides, BLM, county, and contractor personnel participating in weed treatment activities would be provided with training to identify special status plants and maps of special status plant populations associated with weed treatment areas.

Outreach/education on noxious weeds would be provided to the public at campgrounds and trailheads.

# Alternative C

### *Grasslands and Shrublands*

Priority areas for treatment would include big game winter range, Wildland Urban Interface, and current sage grouse habitat.

Objectives for grassland and shrubland treatments under Alternative C are as follows. The total amount of grassland proposed for conifer reduction per decade would be 1,250 to 2,000 acres. The total amount of shrubland proposed for conifer reduction per decade would be 250 to 750 acres. These acres are displayed by major watershed in **Table 2-23**.

Only native seed species would be used in restoring vegetation on disturbed ground.

### *Forests and Woodlands*

#### Dry Forest Types

Compared to the other action alternatives, the management emphasis would be on treating smaller areas than in the other alternatives and allowing for more "natural" disturbances across the landscape. Stand density would be higher and average diameter of trees would be generally be smaller under this alternative than with Alternatives A, B, or D. Alternative C would treat fewer acres than the other alternatives.

The objective for total amount of dry forest treatments per decade under Alternative C would be 2,050 to 4,800 acres. These acres are displayed by major watershed in **Table 2-23**.

The emphasis for restoration would be the same as Alternative B and D with focus on dry forests that have medium to large sized trees and have high tree density. A range of 2,050 to 4,800 acres per decade would be treated (subset of objective for total acreage treatments). As with Alternatives B and D, vegetative treatments would also open up stands of dry Douglas-fir and ponderosa pine with multiple canopy layers and a diverse grass and shrub understory. Dry forest stands that are currently in an ecologically "healthy" condition would be protected from land management actions that would degrade this forest type but very few acres would be maintained under Alternative C. Maintenance of existing dry forest habitat types would be considered "low priority" and fewer than 500 acres per decade would be expected to be treated (subset of objective for total acreage treatments).

#### Cool and Moist Forest Types

Cool and moist forest types would be treated when necessary to maintain or improve stand conditions but treatments would be less under Alternative C than the other action alternatives, but more than in Alternative A.

Treatment of cool and moist forest types would be considered a low priority under Alternative C. Treatments in cool and moist forest types would include the creation of small openings (10 acres or smaller) to allow for regeneration of lodgepole pine, Douglas-fir, subalpine fir or spruce. Areas may also be pre-commercial or commercially thinned.

The objective for total amount of cool and moist forest treatments per decade under Alternative C would be 50 to 550 acres. These acres are displayed by major watershed in **Table 2-23**.

Approximately 50 to 500 acres per decade of medium to large, high density cool and moist forest would be treated in this alternative (subset of objective for total acreage treatments). Small diameter thinning would also occur on up to 50 acres per decade in seedling/sapling and pole size Douglas-fir and lodgepole pine forests.

#### Old Forest Structure

Alternative C would maintain and protect old forest structure and condition. Stands with old forest structure would be protected to maintain stand structures that are relatively complex with highly variable tree densities, healthy and diverse understory composition, and abundant snags and downed logs. Few snags and little down

woody material would be proactively recruited in Alternative C.

### Forest and Woodland Products

The objective for Probable Sale Quantity under Alternative C would be 19,000 to 41,000 CCF or 5 to 12 MMBF per decade. Forest treatments would occur in areas already accessible by the current road system, although helicopter logging may be feasible in difficult to access areas. No new permanent roads would be constructed, and temporary road construction would be kept to a minimum. Temporary roads would be decommissioned within one year of project completion.

The small sale program (estimated quantities of permits and products shown in **Table 2-23)** would maintain the current types of activities but small sale activities involving medium to large trees would be restricted to areas where materials need to be removed due to authorizations such as rights-of-ways, road use agreements, grazing leases, and free use of materials by other agencies and charitable organizations.

Removal of standing dead or down trees or dead woody material for commercial or personal use firewood purposes would be authorized only in designated areas, and the personal use firewood permit currently issued by the BLM and USDA Forest Service for firewood gathering on either public or national forest lands would be dropped.

The BLM would designate areas where live trees could be taken as firewood to meet other resource objectives. No live trees greater than 20 inches DBH would be allowed to be removed as firewood. Firewood cutting would not be allowed in WSAs.

Firewood cutting would not be allowed within 200 feet of live (yearlong flow) streams or within 100 feet of intermittent streams.

Timber Salvage

Where contiguous acres of dead and dying forest exceed 1,000 acres, 50 percent of the area would be maintained as retention. Harvest treatments within the remaining project area may include: 1) creation of forest openings, 2) selective thinning between openings and 3) 50 percent total retention across the harvest treatment area.

### *Riparian*

The emphasis in Alternative C would be placed on coordinating and integrating riparian restoration objectives through other high priority projects. When possible, the restoration and enhancement of aspen, cottonwood, willows, or other riparian dominant species would also be incorporated into other projects in the vicinity of riparian habitats. Riparian communities, including aspen clones, would be maintained, restored, or enhanced to provide vegetative diversity and structure of riparian areas and to benefit wildlife.

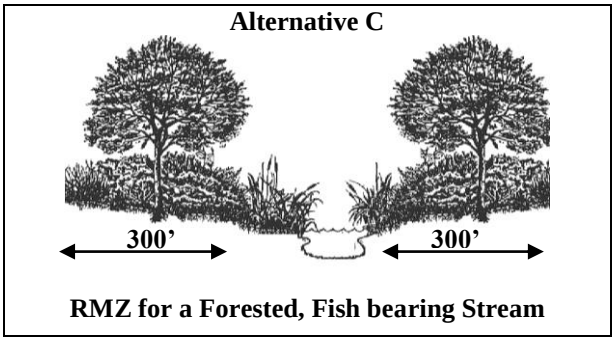
Riparian habitat would be opportunistically treated through other high priority forest and grassland treatments.

### Riparian Management Zones

The Montana Streamside Management Zone Law would be followed. In addition to adhering to SMZ Law, Riparian Management Zones from the edge of the aquatic habitat would be established as follows:

Forested Areas

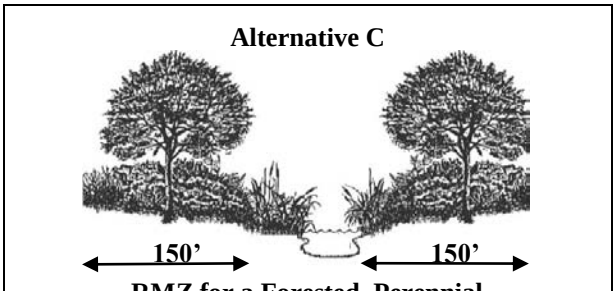
Streams, lakes, ponds, and reservoirs containing fish: The RMZ would consist of the water body and a zone located on all sides of the water body. This zone would extend from the outer edges of the bankfull channel, full pool, or adjacent wetland a distance equal to the top of the inner gorge, the outer edge of the 100-year floodplain, or 300 feet slope distance, whichever is greatest.



**RMZ for a Forested, Fish bearing Stream**

Perennial non-fish bearing streams – The RMZ would consist of the stream and a zone located on both sides of the channel. This zone would extend from the outer edges of the bankfull channel (or adjacent wetland) a distance equal to the top of the inner gorge, the outer edge of the 100 year floodplain, or 150 feet slope distance whichever is greatest.

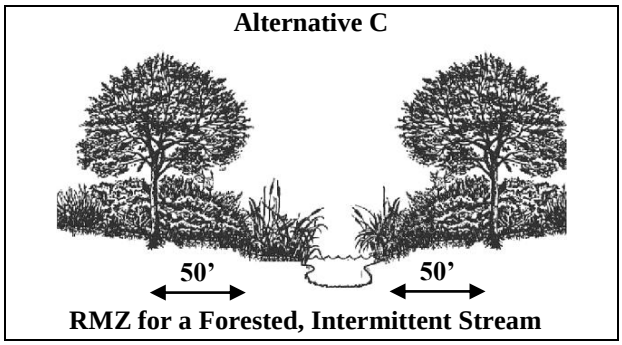
Non-fish bearing ponds, lakes, reservoirs, or wetlands greater than 1 acre: The RMZ would extend from the outer edge of the full pool or wetland a distance of 150 feet slope distance. This area would also include all moderately and highly unstable areas.



**RMZ for a Forested, Perennial, Non-Fish bearing Stream**

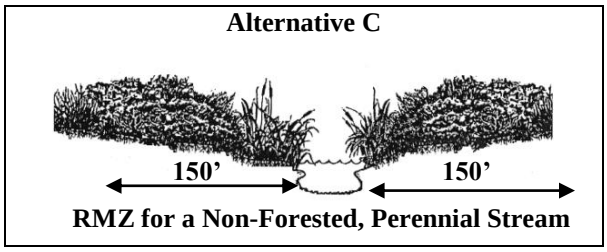
Intermittent streams and wetlands less than 1 acre: The RMZ would consist of the water body and a zone lo-

cated on all sides of the water body. This zone would extend from the outer edges of the bankfull channel or wetland at least 50 feet slope distance.

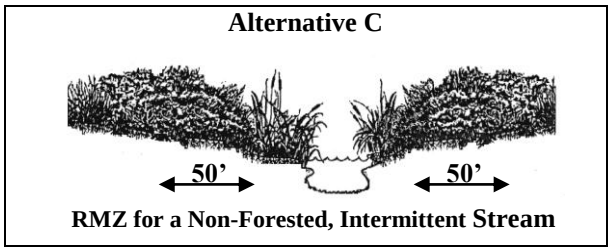



Non-forested Areas

Perennial fish-bearing and non fish-bearing streams or wetlands larger than 1 acre: The RMZ would consist of the water body and a zone located on all sides of the water body. This zone would extend from the outer edges of the bankfull channel, full pool, or adjacent wetland a distance that encompasses the active floodplain. RMZs would extend 150 feet above the break in slope leading down from the lowest terrace to the floodplain. The actual RMZ width may be different for each side of the water body depending on the locations of terrace features.




Intermittent streams and wetlands less than 1 acre: The RMZ would consist of the water body and a zone located on all sides of the water body. This zone would extend from the outer edges of the bankfull channel or wetland at least 50 feet slope distance.




The objective for total amount of riparian vegetation habitat proposed for mechanical and/or prescribed burning treatments per decade under Alternative C would be 75 to 200 acres (this includes vegetative treatments and not changes in grazing practices). These acres are displayed by major watershed in **Table 2-23**.

No commercial timber harvest would be allowed in RMZs. All woody material cut for restoration activities would be retained on site. If an adequate amount of down woody material exists, material may be removed for other riparian or stream restoration activities.

Under Alternative C, the structure and composition of aspen stands would be determined by natural processes or treated opportunistically through other projects. Treated aspen stands would be fenced from livestock grazing and, if necessary, wildlife grazing, and browsing. There would be an emphasis on using native, on-site materials for "natural" barriers. All fences (with the exception of native barriers) would be maintained and removed within 10 years or when the aspen is fully re-established or recovered.

### *Livestock Grazing*

Livestock grazing would be allowed on about 262,000 acres of public land. Approximately 45,000 acres of public land would be unavailable for grazing permits or leases (**Table 2-23**). The amount of forage available on these lands would be 24,710 AUMs active use and 936 AUMs forage reserve, temporary non-renewable AUMs.

After the current permittee ceases livestock grazing, the McMaster Hills and Spokane Hills individual allotments would be established as forage reserve allotments as in Alternative B.

The existing Indian Creek allotment (2,215 acres and 376 AUMs) as well as any lands acquired from the Iron Mask acquisition would be unavailable for grazing lease or permit.

The Centennial Gulch (Ward Ranch) allotment and Medicine Rock (Northeast Helena) riparian area would be unavailable for prescription livestock grazing.

After the current permittee ceases livestock grazing, the McMaster Hills and Spokane Hills individual allotments would be established as forage reserve allotments (An allotment without a term grazing permit that is grazed on a temporary nonrenewable basis. This type of allotment would be used to provide temporary grazing to rest other areas following wildfire, habitat treatments, or to allow for more rapid attainment of rangeland health). Forage reserve allotments would be managed to meet, or move toward meeting, land health standards. Use would be authorized on a temporary, nonrenewable basis. The amount of use would be determined by the BFO. Applicants would be required to meet qualifications per the grazing regulations, and show the ability and commitment to repair and maintain improvements and infrastructure. The BFO would rank qualified applicants according to the following criteria in priority order:

1. Implementing projects or vegetation management on BLM lands.
2. Facilitating a change in management to improve resource conditions on BLM allotments.

3. Accommodating permittees or lessees displaced by natural causes (i.e. wildland fire, drought, insect infestations, etc.)

The criteria found at 43 CFR §4130.1-2 (USDI-BLM 2006a) when conflicting applications are submitted.

Areas identified for prescribed burning would be rested from livestock grazing up to one year prior to treatment, if necessary, to produce fine fuels to carry the burn. Treatment areas would be rested at a minimum of two full years following treatment to promote recovery of vegetation. Guidelines for residual ground cover would be developed in new Allotment Management Plans. Forage utilization would be monitored.

Currently existing exclosures would be maintained free of livestock grazing. Exclosures would be maintained annually before livestock turnout and would be monitored to compare differences between areas grazed and ungrazed by livestock.

Existing livestock exclosures along streams, wetlands, and riparian areas would be maintained as long as needed to meet management objectives. Maintenance of exclosures would be assigned to grazing permittees or other authorized public land users.

Under Alternative C, no change in livestock conversions from cattle to domestic sheep or goats would be allowed in allotments within occupied wild sheep habitat. New sheep and goat allotments or conversions from cattle to sheep or goats would be permitted a minimum of 9 miles from known bighorn sheep habitat. This distance would be greater if deemed necessary through site specific analysis or a cooperative agreement with other federal or state agencies. Goats and sheep could be used for weed control on winter ranges when wild sheep are absent. To minimize contact with bighorn sheep, domestic sheep, and goats used for weed control would only be allowed to graze for up to two weeks near occupied bighorn sheep habitat and there would be a minimum buffer of 4 miles between domestic and wild sheep. Bedding grounds would be a minimum of 6 miles from known bighorn sheep habitat. The use of domestic sheep and goats would only be allowed from May 15 to July 15 unless coordinated with MFWP. A herder would be required to be on site at all times and be able to communicate with the BLM, the herd owner and MFWP. If bighorn sheep and domestic sheep and goats come into contact, the herder would be required to contact the BLM and MFWP immediately**.**

### *Wildland Fire Management*

BFO administered lands would be broken into ten FMUs. The FMUs would have A, B and C designations applied. Approximately 41,000 acres would be designated in category A; 23,000 acres in category B; and 243,000 acres in category C **(Table 2-4** and **Map 4**). The FMUs follow watershed boundaries with the following two exceptions: the Missouri watershed would be broken into three FMUs (Missouri, Central Missouri, and NW Missouri) and the Big Hole watershed would be broken into two FMUs (Big Hole and Wise River) due to the urban interface areas surrounding Helena and Wise River.

**Table 2-4**
**Alternative C Fire Polygons by Watershed**

| FMU | Category[1] | BLM Acres[2] |
|---|---|---|
| Big Hole | C | 60,000 |
| Blackfoot | A | 1,000 |
| Central Missouri | A | 37,000 |
| Gallatin | A | 2,000 |
| Jefferson | C | 82,000 |
| Missouri | C | 101,000 |
| NW Missouri | B | 14,000 |
| Upper Clark Fork | B | 1,000 |
| Wise River | A | 1,000 |
| Yellowstone | B | 8,000 |

[1]Category and associated treatments only apply to BLM land within each zone.

[2]Acres are approximate and rounded to nearest 1000.

Fire management activities would correspond to the FMU designations. Vegetation treatments, including management-ignited prescribed fire and mechanical treatments would not be conducted between May 1st and August 30th to protect nesting migratory birds unless breeding bird surveys document low potential impact to breeding birds. In grassland/shrubland habitats, BLM would plan for prescribed burns that do not consume aboveground vegetation on more than 60 percent (on average) of each unit by surface area.

Use of chemical retardant foam, or additives over live streams would only be allowed if there were a risk to human life and safety. Fish screens (1/8 inch diameter holes) on hoses would be required when removing water from fish bearing streams during fire management activities. Maps of fish bearing streams would be developed in the BFO Fire Management Plan for use in initial attack of wildland fires.

### *Noxious Weed Management*

Under Alternative C, less aggressive weed management would be needed in response to the decreased ground disturbance in the Decision Area. Suppression and control of weed infestations in special designation areas would be a moderate priority.

The objective under Alternative C would be to treat an estimated 16,000 to 38,000 acres of weeds per decade, not including biocontrol measures such as insect releases, grazing, or use of pathogens.

Aerial spraying of herbicides or pesticides would not occur.

To prevent special status plants from being sprayed with herbicides, BLM personnel would be provided with maps of special status plant populations associated with weed treatment areas.

Outreach/education on noxious weeds would be provided to the public at campgrounds and trailheads.

## Alternative D

### *Grasslands and Shrublands*

Priority areas for treatment would include big game winter range, Wildland Urban Interface and current and historic sagebrush habitat, forest meadows and parks, and bighorn sheep habitat.

Objectives for treating grasslands and shrublands under Alternative D are as follows. The total amount of grassland proposed for conifer reduction per decade would be 5,500 to 19,050 acres. The total amount of shrubland proposed for conifer reduction per decade would be 1,850 to 6,800 acres. These acres are displayed by major watershed in **Table 2-23.**

As in Alternative B, native or low impact, non-invasive seed mixtures would be used when restoring vegetation on disturbed ground.

### *Forests and Woodlands*

#### Dry Forest Types

The objective for total amount of dry forest treatments per decade under Alternative D would be 7,300 to 18,200 acres. These acres are displayed by major watershed in **Table 2-23**.

As with Alternatives B and C, the emphasis for restoration would focus on dry forests with medium to large sized trees, and with high tree densities. In dense, old, and mature Douglas-fir and ponderosa pine forests, stand density would be moved toward stands that consist of fewer trees per acre with a larger average diameter. A range of 5,600 to 12,200 acres per decade of dry forest habitat type with medium to large sized trees and high tree densities would be treated under Alternative D (subset of objective for total acreage treatments). Dry forest stands that are in an ecologically "healthy" condition which can sustain the growth of the larger trees while successfully reproducing and maintaining the juvenile growth of the younger trees would also be maintained under Alternative D. Maintenance treatments in forests would promote the large, overstory trees and natural regeneration that would provide diverse age and size classes. Maintenance of existing dry forest habitat types would be considered "moderate priority" with 1,000 to 3,500 acres per decade proposed for treatment (subset of objective for total acreage treatments).

Approximately 500 to 1,500 acres per decade of small diameter thinning of seedling/sapling and pole size dry forest would also occur with Alternative D (subset of objective for total acreage treatments). A small amount of pure limber pine habitat would also be treated under Alternative D, approximately 200 to 1,000 acres per decade. The majority of ponderosa pine treatments would occur in the Upper Missouri Watershed.

#### Cool and Moist Forest Types

Cool and moist forest types would be managed the same as in Alternative B. Restoration of these habitat types may also be done to meet desired future conditions for cool and moist forest ecosystems and wildlife habitat including the creation of forage for lynx in lodgepole pine forests.

Treatment of cool and moist forest types would be considered a moderate priority under Alternative D. The priority watershed for implementation of treatments in cool and moist forest is the Big Hole.

The objective for total amount of cool and moist forest treatments per decade under Alternative D would be 1,000 to 5,050 acres. These acres are displayed by major watershed in **Table 2-23**.Approximately 800 to 4,450 acres per decade of stands with medium to large sized trees and with high tree densities in cool and moist forest types would be treated in this alternative. Small diameter thinning would also occur on approximately 200 to 600 acres per decade in seedling/sapling and pole size cool and moist Douglas-fir and lodgepole pine forests. These acreages are subsets of the objective for total acreage treatments.

Treatments in cool and moist forest types would include the creation of openings to allow for regeneration of lodgepole pine and Douglas-fir. Areas would also be pre-commercial or commercially thinned. Commercial products such as timber and biomass would be produced from these treatments.

#### Old Forest Structure

Old forest structure would be managed the same as in Alternative B.

#### Forest and Woodland Products

Based on the expected amount of treatment acres (including the WUI projects), the objective for PSQ would be 36,000 to 107,000 CCF or 10 to 30 MMBF per decade under Alternative D.

Some new permanent roads may be built for long-term management of areas where multiple entries would be necessary to meet objectives. New road construction, however, would be kept to a minimum. Some new permanent roads could be "open" to the public if travel plan objectives for the area are met. Temporary road construction would be kept to a minimum.

The small sale program would provide the estimated quantities of permits and products shown in **Table 2-23.** Access for small sales would be developed as needed. Alternative D would also promote and encourage biomass utilization and encourage and promote the use of woody material in local businesses such as landscaping and furniture building.

Personal use firewood permits valid for wood collection from both BLM and Forest Service lands in Western Montana would continue to be offered by BLM in cooperation with the Forest Service.

Standing dead and down wood would be allowed to be taken as firewood. BLM could designate specific areas for firewood cutting `of live trees to meet other resource objectives. No dead trees greater than 24 inches DBH would be allowed to be cut for firewood.

Firewood would not be allowed to be cut within 100 feet of live (yearlong flow) streams or within 50 feet of intermittent streams or within the SMZ, whichever width is greatest.

Timber Salvage

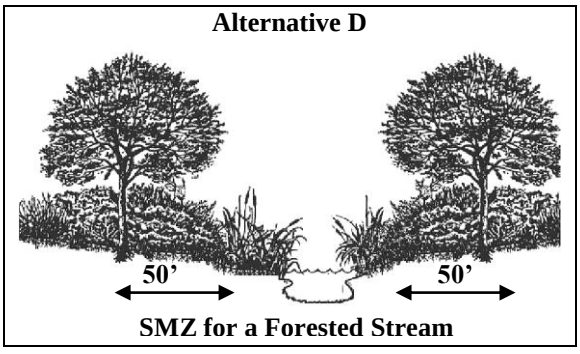
Where contiguous acres of dead and dying forest exceed 1,000 acres, 30 percent of the area would be maintained as retention. Harvest treatments within the remaining project area may include: 1) creation of forest openings, 2) selective thinning between openings, and 3) no retention requirements within harvest treatment area.

Bark beetle suppression treatments, which may target large tree removal, would be permitted to contain outbreaks and to reduce the risk to other forest stands in the vicinity.

### *Riparian*

The emphasis in Alternative D would be to actively restore riparian habitats. When possible, the restoration and enhancement of aspen, cottonwood, willows, or other riparian dominant species along with channel improvement would also be incorporated into other projects in the vicinity of the riparian habitats.

Under Alternative D, riparian protection would be provided by Streamside Management Zones.




The objective for total amount of riparian vegetation habitat proposed for mechanical and/or prescribed burning treatments per decade under Alternative D would be 300 to 1,700 acres (this includes vegetative treatments and not changes in grazing practices). These acres are displayed by major watershed in **Table 2-23**.

Forest and fuels management activities including commercial timber harvest would be allowed in SMZs to meet riparian restoration or maintenance objectives and only if adequate woody material remains in the riparian area.

Where the primary project objective is aspen restoration, treated aspen stands would be fenced from livestock and wildlife grazing and browsing. Fencing could consist of native, on-site materials to create barriers to livestock and wildlife. All fences (with the exception of barriers created from native, on-site material) would be maintained and removed within 10 years or when the aspen is fully re-established or recovered.

### *Livestock Grazing*

Livestock grazing would be allowed on about 278,000 acres of public land. Under Alternative D, approximately 29,000 acres of public land would be unavailable for grazing permits or leases **(Table 2-23**). The amount of forage available on these lands would be 25,677 AUMs active use.

After the current permittee ceases livestock grazing, the McMaster Hills and Spokane Hills individual allotments would be available to qualified applicants per the grazing regulations. These allotments would be administered like all other existing allotments.

The existing Indian Creek allotment would be expanded up to an additional 5,566 acres and 700 AUMS by the Iron Mask Acquisition. The Indian Creek allotment would be available to qualified applicants per the grazing regulations. This allotment would be administered like all other existing allotments. The Centennial Gulch (Ward Ranch) allotment would be available to qualified applicants per the grazing regulations.

Allotments where grazing preference is relinquished would remain available for livestock grazing leases or permits.

Areas identified for prescribed burning would be rested from livestock grazing prior to treatment, if necessary, to produce fine fuels to carry the burn. Treatment areas would be rested at a minimum of two full years following treatment to promote recovery of vegetation.

Grazing practices would be adjusted to protect or enhance fish and wildlife habitat when livestock grazing is a contributing factor to not meeting Land Health Standards.

Currently existing exclosures would be maintained free from livestock grazing as long as needed to meet objectives. Exclosures would be checked and maintained

every five years. Maintenance would be accomplished as per the terms and conditions of existing cooperative agreements.

Existing livestock exclosures along streams, wetlands, and riparian areas would be maintained as long as needed to meet management objectives. Exclosures would be checked and maintained per the terms and conditions of existing cooperative agreements or every five years.

As with Alternative A, the existing Instruction Memorandum 98-140 (USDI-BLM 1998b) would be followed to protect wild sheep. As with Alternative B, goats and sheep could be used for weed control on winter ranges when wild sheep are absent. To minimize contact with bighorn sheep, domestic sheep, and goats used for weed control would only be allowed to graze for up to 1 month near occupied bighorn sheep habitat and there would be a minimum buffer of 2 miles between domestic and wild sheep. Bedding grounds would be a minimum of 4 miles from known bighorn sheep habitat. The use of domestic sheep and goats would only be allowed from May 1 to July 31 unless coordinated with MFWP. A herder would be required to be on site at all times and be able to communicate with the BLM, the herd owner and MFWP. If bighorn sheep and domestic sheep and goats come into contact, the herder would be required to contact the BLM and MFWP immediately.

### *Wildland Fire Management*

BFO administered lands would be broken into ten FMUs. The FMUs would have B, C, and D designations applied. Approximately 42,000 acres would be designated in category B; 82,000 acres in category C; and 183,000 acres in category D (**Table 2-5** and **Map 5**).

**Table 2-5**
**Alternative D Fire Polygons by Watershed**

| FMU | Category[1] | BLM Acres[2] |
|---|---|---|
| Big Hole | C | 60,000 |
| Blackfoot | B | 1,000 |
| Central Missouri | B | 37,000 |
| Gallatin | B | 2,000 |
| Jefferson | D | 82,000 |
| Missouri | D | 101,000 |
| NW Missouri | C | 14,000 |
| Upper Clark Fork | B | 1,000 |
| Wise River | B | 1,000 |
| Yellowstone | C | 8,000 |

[1]Category and associated treatments only apply to BLM land within each zone.

[2]Acres are approximate and rounded to nearest 1000.

The FMUs follow watershed boundaries with two exceptions: the Missouri watershed is broken into three FMUs (Missouri, Central Missouri, and NW Missouri) and the Big Hole watershed would be broken into two FMUs (Big Hole and Wise River) due to the urban interface areas surrounding Helena and Wise River.

Fire management activities would correspond to the FMU designations. There would be no restriction on timing of vegetation treatments; and planned management-ignited prescribed fire units size would be determined by an interdisciplinary team through site-specific NEPA analysis. In grassland/ shrubland habitats, BLM would plan for prescribed burns that do not consume above-ground vegetation on more than 90 percent (on average) of each unit by surface area.

Delivery of chemical retardant, foam or additives to live streams would be avoided.

### *Noxious Weed Management*

Under Alternative D, more aggressive weed management would be needed in response to the increased use and ground disturbance in the Decision Area. Prevention and control of weed infestations in special designation areas, Weed Management Areas (areas with agreements between landowners to cooperatively manage weeds), and areas currently under a multi-year treatment plan would be considered a moderate priority.

The objective under Alternative D would be to treat an estimated 25,000 to 61,000 acres of weeds per decade, not including biocontrol measures such as insect releases, grazing, or use of pathogens.

Aerial spraying of herbicides or pesticides would not occur when eye-level winds are greater than 6 miles per hour or within 100 feet of streams or wetlands. Aerial spraying would be conducted in a way that minimizes the effects on native forbs, grasses, and shrubs.

To prevent special status plants from being sprayed with herbicides, BLM, county, and contractor personnel participating in weed treatment activities would be provided with training to identify special status plants and maps of special status plant populations associated with weed treatment areas.

Outreach/education on noxious weeds would be provided to the public at campgrounds, trailheads, to specific user groups, at schools, fairs, and community events.

## WILDLIFE, FISH, WILDLIFE HABITAT, SPECIAL STATUS AND PRIORITY PLANT AND ANIMAL SPECIES

**Goal 1 –** Manage to provide a variety of well-distributed plant communities to support a diversity of habitats.

**Goal 2** – Conserve, enhance, restore, or minimize impacts to areas of important wildlife habitat such as rare or limited seasonal habitats, corridors, blocks of intact functional habitat across the landscape, areas of low road-density, foraging areas, and riparian areas.

**Goal 3** – Conserve, enhance, or restore special habitat features or minimize impacts to special habitat features including, but not limited to caves, cliffs, riparian areas, wetlands, snags, and down woody material.

**Goal 4** – Management prescriptions or authorizations conserve, enhance, restore, minimize impacts, or contribute to the recovery of threatened, endangered, or candidate plant or animal species.

**Goal 5** – Management prescriptions or authorizations conserve or enhance habitat or minimize negative effects to habitat of BLM sensitive plant and animal species to prevent the federal listing of these species.

**Goal 6** – Special-status species and habitats are conserved through collaboration and cooperation.

**Goal 7** – Protect, maintain, restore, and rehabilitate sagebrush habitat in occupied or historic sage grouse habitat (as mapped by MFWP).

## Management Common to All Alternatives

All alternatives would emphasize actions that would promote conservation of special status wildlife species and the ecosystems on which they depend. All alternatives would emphasize maintaining and supporting healthy, productive, and diverse populations and communities of native plants and animals (including big game species such as deer, elk, and bighorn sheep) appropriate to soil, climate, and landform.

One key objective under all alternatives would be for BLM to conserve federally listed and recently de-listed species. BLM would implement recovery activities for these species by complying with and adopting current and future recovery plans (such as Grizzly Bear Recovery Plan (USFWS 1993), Ute's Ladies' Tresses Recovery Plan, Grizzly Bear Management Plan for Southwest Montana (MFWP 2002a), Interim Bull Trout Habitat Conservation Plan Strategy, Montana Gray Wolf Conservation and Management Plan (2004), Northern Rocky Mountain Wolf Recovery Plan (USFWS 1987), Lynx Conservation Assessment and Strategy (see **Appendix G – Wildlife**), and the Montana Bald Eagle Management Plan (MBEWG 1994).

Another objective under all alternatives would be for BLM to conserve sensitive species. BLM would manage habitat for sensitive terrestrial and aquatic species in a manner consistent with current and future restoration, conservation and recovery plans, and conservation agreements (westslope and Yellowstone cutthroat trout, Arctic grayling and prairie dog). Management activities would be designed and implemented consistent with adopted conservation strategies, including Montana's Comprehensive Fish and Wildlife Conservation Strategy (MFWP 2005b), and current, accepted science for special status and priority species.

Fish and wildlife would continue to be evaluated on a case-by-case basis as part of project level planning. Such evaluation would consider the significance of the proposed project and the effects to fish and wildlife habitat. Measures to reduce impacts would be attached as appropriate to assure compatibility of projects with management objectives for fish and wildlife habitat.

Habitat improvement projects would be implemented where necessary to restore wildlife habitat and/or to improve unsatisfactory or declining wildlife habitat.

Important blocks of hiding, security, and thermal cover for big game would be considered during project planning.

For all alternatives, all new fences would be built to standard BLM wildlife specifications (USDI – BLM 1989b. Bureau of Land Management Fencing Handbook, H-1741-1) to allow wildlife passage with the exception of fences built specifically to keep native ungulates out of an area unless site specific analysis indicates other specifications are necessary.

Consistent with the requirements of the Endangered Species Act (1973) and BLM policy, all alternatives would ensure that actions are consistent with the conservation needs of special status species. The BLM would seek opportunities to conserve and improve special status species habitats and habitats for native plants and wildlife in project level planning and in other BLM authorized, funded, or approved activities (BLM Manual 6840 – Special Status Species Management, Endangered Species Act).

BLM would determine the distribution, abundance, and management needs of special-status plant and animal species and species of local interest occurring on BLM administered lands and evaluate needed management for the conservation of these species.

As per Executive Order 13443, the BLM would facilitate the expansion of hunting opportunities and management of game species and their habitats.

BLM would cooperate and collaborate with federal, tribal, and state wildlife management agencies as well as private landowners to improve habitat for wildlife (including game species as per Executive Order 13443) and special status plants.

Conservation actions, inventories, and monitoring for special status wildlife and aquatic species would be prioritized based on habitats at risk and rarity.

Timing restrictions may be used in special status species habitat. Human activities that disrupt special status species habitats during their seasons of use, particularly

during the breeding and winter seasons would be avoided or minimized.

Sage grouse management activities would be designed and implemented to be consistent with adopted conservation strategies such as The National and Montana Management Plan and Conservation Strategies for Sage Grouse in Montana (MSGWG 2005) and current, accepted science.

Vegetation altering activities could occur in sage grouse habitat where it does not result in long-term loss of habitats or contribute to the need to list. Sufficient sagebrush densities and cover would be retained in sage grouse habitat.

BLM would coordinate the fisheries program with other programs to improve aquatic habitat.

Populations of special-status plants would be monitored to assess their condition and trend.

BLM would maintain and improve critical or essential habitat to prevent deterioration and provide recovery for federally listed plant species.

Field inspections would be conducted to identify special-status plant species prior to authorized surface disturbing activities. Waivers for on-the-ground inventory may be granted in areas determined to have low potential based on previous research.

## Alternative A – No Action

MFWP and the USFWS would be consulted prior to implementing projects that may affect habitat for threatened and endangered species.

Management actions would be consistent with the guidelines that were developed through the Interagency Wildlife Monitoring Program for mineral exploration and development.

All management activities, including timber harvest and prescribed burning, in the Elkhorn Wildlife Management Area would be designed to maintain or improve wildlife habitat. New road construction would be kept to a minimum and all new roads would be closed to the public.

Guidelines from the Montana Cooperative Elk-Logging Study (Lyons *et al.* 1985) would continue to be used in formulation of forest activity plans affecting occupied grizzly bear and elk habitat including: managing public vehicle access to maintain effectiveness of security cover and key seasonal habitat for deer and elk; maintaining adequate untreated peripheral zones around important moist sites; maintaining adequate thermal and security cover in deer and elk habitat, particularly within timber stands adjacent to primary winter foraging areas; ensuring slash depth in clear cuts does not exceed 1.5 feet; and generally discouraging thinning immediately adjacent to clear cuts.

The MFWP would be consulted in advance of timber harvest activities involving: construction of new access roads into unroaded elk summer and fall range; critical, crucial, or essential wildlife habitat; and sales of over 250 MBF.

Wildlife reintroduction proposals would be evaluated and recommendations would be made to the MFWP.

Animal control projects would be coordinated with the USFWS and Wildlife Services, and in the case of aerial gunning with the Montana Department of Livestock.

Seasonal timing restrictions on projects that cause disturbance would continue to be applied where they are needed to minimize the impacts of human activities on important seasonal wildlife habitat. The major types of seasonal wildlife habitat and the time periods which restrictions may be needed are: elk, mule deer, moose and bighorn sheep winter and spring range (12/1 to 4/30), elk, mule deer and bighorn sheep calving range/habitat (5/1 to 6/30), mountain goat winter range (12/1-4/30) and mountain goat spring range (5/1-6/30), grizzly bear spring and summer range (4/1 to 9/1), and grizzly bear denning habitat (10/1 to 4/30).

## Management Common to Action Alternatives (B, C, and D)

All federally listed and BLM sensitive species and their habitats would be considered priority species and habitats. Additional priority wildlife species would be based on public interest, density, diversity or population size including big game (such as elk, bighorn sheep, deer, and antelope) and migratory birds listed by USFWS and Level 1 and Level 2 species listed under the Montana Bird Conservation Plan (Partners in Flight 2000). Tier I and Tier II habitat and species from Montana's Comprehensive Fish and Wildlife Conservation Strategy (MFWP 2005b) would also be considered priority species and habitats. Priority habitats would include habitat for all special status species as well as riparian areas, dry savannah forest, special habitats including caves, cliffs, and snags and down woody material, sagebrush, bitterbrush communities and mountain mahogany communities.

Management techniques, including but not limited to prescribed and managed wildland fire, prescriptive livestock grazing, planting, exclusion to intense disturbance, timber harvest and other mechanical methods would be used to restore, maintain or improve the desired ecological conditions of vegetation communities for the purpose of improving forage, nesting, breeding, and security habitat, hiding cover and travel corridors for a wide diversity of terrestrial and aquatic species.

The BLM would emphasize providing habitat of sufficient quantity and quality, including connectivity and wildlife movement corridors, habitat complexity, forest openings, edges, and ecotones, to enhance biological diversity and provide quality, sustainable habitat for

native wildlife species. BLM would maintain suitable habitat conditions and minimize fragmentation in linkage corridors among habitats and priority species. BLM land would be managed to consider the relationship between large special status species populations and smaller isolated populations whenever possible. The intent would be to maintain the function and diversity of all habitats in large areas (patches) across the landscape and minimize long-term human disturbance to wildlife to provide habitat for wildlife movement, dispersal, and home ranges. In the context of wildlife habitat fragmentation, the size of the "patch" would be related to the size of the BLM parcel(s) and adjacent federal or state lands.

BLM would coordinate with MFWP to determine whether habitat and other conditions exist that would allow successful reintroduction of locally or regionally absent species, such as westslope cutthroat trout, sage grouse, beaver, bighorn sheep, mountain goat, and prairie dogs.

To the extent possible, BLM would: maintain large patches of high quality sagebrush in occupied or historic sage grouse habitat (as mapped by MFWP); maintain connections between sagebrush habitats and enlarge the size of sagebrush patches in occupied or historic sage grouse habitat.

During project level planning, key habitat components that would be emphasized would include: winter range, seasonal migration corridors, breeding sites, roosting sites, and foraging habitats adjacent to raptor nest sites.

Disturbance of crucial wildlife breeding areas such as known den sites or big game breeding or winter range would be minimized. Actions that cause disturbance would be minimized to reduce negative effects to special status and priority species during seasonally sensitive periods such as; the breeding, nesting, winter, and roosting seasons.

Seasonal timing restrictions on projects that cause disturbance would be applied where needed to minimize the impacts of human activities on important seasonal wildlife habitat. The major types of seasonal wildlife habitat and the time periods which restrictions may be needed are: big game winter and spring range (12/1 to 5/30), big game calving range/habitat (5/1 to 6/30), mountain goat nursery areas (5/1 to 7/15), mountain goat breeding areas (11/1 to 12/31), mountain goat winter range (10/15 to 5/15), grizzly bear spring and summer range (4/1 to 9/1), and grizzly bear denning habitat (10/1 to 4/30). These dates would be revised when new data becomes available.

One objective under all action alternatives would be to maintain functional blocks of security habitat for big game species across the landscape. Where minimum-size blocks of security habitat (250 acres), as defined by Hillis et al. (1991), are located, they would be retained in a suitable condition during project planning and implementation. Protection of larger blocks of security habitat would also be addressed during project or watershed level planning. Where security habitat is limited or fragmented across the landscape, the BLM would emphasize improving habitat through vegetation treatments and road closures (including seasonal closures) to increase security habitat for big game species.

BLM would close rock climbing on spires with active raptor nests and educate the public about the importance of avoiding such locations.

Within appropriate habitats, snags and down woody material would be managed to be well-distributed across the landscape in sufficient quantity and quality to support species dependent upon these habitats.

At the project level, dead and down woody material would be retained in amounts that are within the range of natural variability for the plant community, to the extent compatible with reforestation objectives, fire hazard reduction standards, and public safety.

In grasslands and shrublands undergoing vegetation treatments such as the removal of conifer encroachment through mechanical thinning or prescribed burning, all trees and snags with characteristics of old forest structure would be left standing to the extent practicable.

All action alternatives would emphasize protecting and restoring special habitat components or features that contribute to the productivity of bat species. These features include, but are not limited to, caves, cliffs, riparian areas and wetlands and snags and down wood.

Caves and abandoned mines would be surveyed and assessed for bat use of features. BLM would determine the need for closures or seasonal closures for activities affecting caves and abandoned mines. Hibernacula closure dates would be approximately October 15 to May 1 and maternity closure dates would be approximately April 15 to September 30.

Bat gates or other suitable measures would be used to protect bat habitat when bat use of caves or abandoned mines is determined. Public health and safety would take precedence over protection of bat habitat if hazardous mine openings cannot be remediated with installation of bat gates. Efforts would be made to safely remove resident bats prior to closure.

BLM would comply with the standards and guidelines in the Canada Lynx Conservation Assessment and Strategy (**Appendix G – Wildlife**).

BLM would develop and implement human food storage regulations and guidelines in grizzly bear distribution zones in coordination with MFWP and other agencies.

All action alternatives would emphasize maintaining diverse, healthy, productive, well-distributed aquatic habitats and communities to increase populations of native fish and other aquatic species.

The BLM would emphasize maintaining and/or restoring the structure, composition, and function of aquatic ecosystems to support a diversity of aquatic plant and animal species and emphasize hydrologic connectivity within watersheds to maintain and/or restore habitat and connectivity needs for populations of aquatic dependent species.

The BLM would restore and/or maintain riparian structure, composition, and processes, including physical integrity of riparian ecosystems, amount and distribution of woody debris to sustain physical and biological complexity, adequate summer and winter thermal regulation, water quality and hydrologic processes, distribution and diversity of riparian vegetative communities and source habitats for riparian dependent species. BLM would opportunistically enhance or restore habitat for westslope and Yellowstone cutthroat trout and Arctic grayling.

The distribution and abundance of native fishes and other aquatic species would be increased through the maintenance or restoration of habitat.

In select areas identified for native fish restoration, BLM would collaborate with MFWP to remove non-native fish species that out-compete or hybridize with native cutthroat trout.

Transportation system effects on fisheries resources would be reduced. To the extent possible, roads would be located, designed and maintained to reduce sedimentation, identify and remove unnatural barriers, eliminate fish passage barriers (when desired), and restore or maintain riparian vegetation.

Watershed restoration projects would be designed and implemented in a manner that promotes the long-term ecological integrity of ecosystems, conserves the genetic integrity of native species, and contributes to meeting riparian standards.

## Alternative B – Preferred Alternative

Alternative B would also emphasize protection and restoration of habitats for native wildlife, plants, and special status species. There would be a focus on biological diversity by restoring vegetation cover types and structural stages that have declined substantially including dry, open forest habitats with low tree densities, meadow habitats, shrub and hardwood dominated riparian systems, as well as open grasslands and shrublands with low tree densities. Using vegetative treatments described in the previous sections of this chapter, this alternative would restore vegetation to become more consistent with natural disturbance regimes and with the landform, climate, and biological and physical characteristics of the ecosystem. Management would emphasize moderate to large vegetation patch sizes and distribution to be more consistent with natural disturbance regimes and ecosystem characteristics.

At the Field Office scale, the intent would be to maintain, protect, and restore habitat for priority wildlife species including but not limited to: deer, elk, pronghorn, bighorn sheep, and sage grouse.

Alternative B would maintain, improve, and restore habitats to support healthy, productive, and diverse wildlife populations and communities of native plants and animals. Where consistent with habitat capabilities and national conservation direction, Alternative B would contribute to meeting state wildlife species management objectives for deer, elk, pronghorn, bighorn sheep, and special status species.

One objective under Alternative B would be to minimize disturbance to big game and grizzly bears. There would be no net increase in permanent roads built in areas where open road densities are 1 mi/mi$^2$ or less in big game winter and calving ranges, and within the current distribution of grizzly bear unless not possible due to right-of-ways, leases, or permits. All practicable measures would be taken to assure that important habitats with low road densities remain in that condition. This alternative would also manage to reduce open road densities in big game winter and calving ranges, and within the current distribution of grizzly bear where they currently exceed 1 mi/mi$^2$.

At the Field Office scale, BLM would enhance and improve big game winter range by protecting and restoring mountain mahogany stands where conifers have become established. Detrimental effects on mountain mahogany stands would be avoided with projects in big game winter range whenever possible. When detrimental effects are unavoidable, loss of mountain mahogany would be minimized. BLM would also proactively restore the distribution and vigor of bitterbrush stands through vegetative treatments designed to reduce competing plants, create a variety of age classes, and create conditions conducive to bitterbrush natural regeneration.

Alternative B would include an objective to manage for adequate numbers, species and sizes of snags and levels of downed wood to contribute to the needs of wildlife, invertebrates, fungi, bryophytes, saprophytes, lichens, other organisms, long-term soil productivity, nutrient cycling, carbon cycles and other ecosystem processes. To determine the "range of natural conditions" for snag densities, BLM would follow the "Northern Region Snag Management Protocol" (USDA-FS 2000a) until more current or site specific information becomes available. Prescribed fire, mechanical treatments, inoculation, or other appropriate methods would be used to create snags and down woody material, where deficient, in appropriate vegetation types across the landscape.

Management for wildlife values associated with large amounts of down wood and snags would be emphasized less in WUI areas to allow for fuels reduction projects that would reduce the potential for extreme wildland fire. Fences identified as barriers to wildlife movement

would be considered for removal or reconstruction to follow BLM fence specifications for wildlife.

Noise disturbance and management activities would be avoided or minimized within 0.5 miles of raptor nests during the nesting and brood rearing period.

Unoccupied raptor nests (on cliffs, rocky outcrops or in trees) would be protected from removal or destruction for 5 years, or the period a known preferred prey species fluctuates from population highs to lows. Nests would not have to be retained if physically damaged past the point of repair by raptors. In forested habitat types, a 0.25 mile buffer of suitable habitat around unoccupied nests would be maintained for 5 years.

Bald eagle nesting and roosting habitats would be actively protected from loss due to fire, insect, or disease by reducing vegetation competition and encroachment in these habitats.

Clearing of vegetation, except noxious weeds, would not be allowed within 250 feet of the entrance of caves and abandoned mines with populations of bats except when needed for public safety. Vegetation could be removed if necessary when installing bat gates, or when it becomes an obstruction to bat movement.

For habitat enhancement, fire rehabilitation and other restoration projects, a variety of techniques would be considered to protect plantings and seedlings from wildlife and domestic grazing including rest, fencing, netting, and wildlife repellants.

Alternative B would manage for diverse and well-distributed aquatic habitats to increase and maintain habitat for native and locally important fish.

Genetically pure and slightly hybridized (less than 20 percent hybridization) westslope cutthroat trout populations would be managed by maintaining or restoring high-quality habitats and by expanding populations. Under Alternative B, the BLM would work with MFWP to remove brook trout and other non-native aquatic species that out-compete or breed with westslope cutthroat trout through the use of electroshocking or other physical or chemical means.

To prevent spread of non-native, invasive aquatic species, BLM would post educational signage at all BLM boat ramps on waterborne invasive species.

## Alternative C

Alternative C would actively restore fewer acres of habitat through vegetative treatments for native wildlife and special status species than Alternatives B or D. Management would emphasize protecting small to large vegetation patch sizes.

Habitat for locally important wildlife species such as deer, elk, pronghorn, bighorn sheep, and sage grouse would be maintained or protected. Fewer acres of habitat for these species would be proactively restored with Alternative C then the other action alternatives. Alternative C would emphasize protecting habitats to support healthy productive and diverse wildlife populations, and, where consistent with habitat capabilities and national conservation direction, contribute to meeting state wildlife species management objectives for deer, elk, pronghorn and bighorn sheep and other priority species.

Alternative C would restore fewer vegetation communities to become more consistent with natural disturbance regimes and with the landform, climate, and biological and physical characteristics of the ecosystem.

Like Alternative B, Alternative C would include the objective to minimize disturbance to big game and grizzly bears. There would be no net increase in permanent roads built in areas where open road densities are 1.5 $mi/mi^2$ or less in big game winter and calving ranges and within the current distribution of grizzly bear unless not possible due to rights-of-way, leases or permits. All practicable measures would be taken to assure that important habitats with low road densities remain in that condition. This alternative would also manage to reduce open road densities in big game winter and calving ranges and within the current distribution of grizzly bear where they currently exceed 0.5 $mi/mi^2$.

Natural processes and continued fire suppression would determine the structure and composition of mountain mahogany where conifers have become established. Mountain mahogany stands would be restored or enhanced opportunistically through other higher priority projects. Bitterbrush would be protected or restored opportunistically through other projects.

Like Alternative B, Alternative C would include the objective of managing for adequate numbers, species, and sizes of snags and levels of down wood. To determine the "range of natural conditions" for snag densities, BLM would follow the "Northern Region Snag Management Protocol", January 2000, USDA Forest Service Northern Region, until more current or site specific information becomes available. Snags and down woody material would not be proactively created where deficient on the landscape but would be created opportunistically through other project work such as fuels reduction or ecosystem restoration. The focus would be snag and down wood protection instead of actively creating these features.

Fences identified as barriers to wildlife movement would be removed or reconstructed to follow BLM fence specifications for wildlife. Noise disturbance and management activities would be avoided or minimized within 1 mile of raptor nests during the nesting and brood rearing period.

Unoccupied raptor nests (on cliffs, rocky outcrops or in trees) would be protected from removal or destruction for 7 years, or the period a known preferred prey species fluctuates from population highs to lows. Nests would not have to be retained if physically damaged past the

point of repair by raptors. In forested habitat types, a 0.5 mile buffer of suitable habitat would be maintained around unoccupied nests for 7 years.

As with Alternative B, bald eagle nesting and roosting habitats would be actively protected from loss due to fire, insect or disease by reducing vegetation competition and encroachment in these habitats. As with Alternative B, clearing of vegetation, except noxious weeds, would not be allowed within 250 feet of the entrance of caves and abandoned mines with populations of bats except when needed for public safety. Vegetation could be removed when installing bat gates or when it becomes an obstruction to bat movement.

For habitat enhancement, fire rehabilitation and other restoration projects, plantings, and seedlings would be protected from the effects of wildlife and domestic grazing using methods such as rest, fencing, netting, and wildlife repellants.

All westslope cutthroat trout populations, regardless of hybridization, would be protected by maintaining high-quality habitats and by expanding populations.

BLM would work with MFWP to remove brook trout and other non-native aquatic species that out-compete or breed with westslope cutthroat trout through the use of electroshocking or other physical or chemical means.

To prevent spread of non-native, invasive aquatic species, BLM would post educational signage at all boat ramps on waterborne invasive species

## Alternative D

Alternative D would protect and restore habitat for native wildlife and special status species. Alternative D would restore more vegetative acres than Alternatives A, B, or C. Management would emphasize vegetation patch size and distribution to be more consistent with natural disturbance regimes and ecosystem characteristics.

Alternative D would have a focus on biological diversity by restoring vegetation cover types and structural stages that have declined substantially from the historical to the current time period. Vegetation would be restored to become more consistent with natural disturbance regimes and with the landform, climate, and biological and physical characteristics of the ecosystem. Habitats would be maintained or improved to support healthy, productive, and diverse populations and communities of native plants and animals (including species of local importance). Where consistent with habitat capabilities and national conservation direction, Alternative D would contribute to meeting state wildlife species management objectives for deer, elk, pronghorn, bighorn sheep, and other priority species.

Habitat for locally important wildlife species such as deer, elk, pronghorn, bighorn sheep, and sage grouse would be maintained, protected, and restored.

As with Alternative B, Alternative D would include the objective of minimizing disturbance to grizzly bears by allowing no net increase in permanent open roads in areas where open road densities are 1 mi/mi$^2$ or less within the current distribution of grizzly bear unless not possible due to rights-of-way, leases or permits. All practicable measures would be taken to assure that important habitats with low road densities remain in that condition. This alternative would also manage to reduce open road densities within the distribution of grizzly bear that currently exceed 1 mi/mi$^2$.

Alternative D would also include the objective to minimize disturbance to big game. No net increase in permanent open roads would be allowed in areas where open road densities are 0.5 mi/mi$^2$ or less in big game winter and calving ranges unless not possible due to rights-of-way, leases or permits. All practicable measures would be taken to assure that important habitats with low road densities remain in that condition. Open road densities would be reduced in big game winter and calving ranges where they currently exceed 1.5 mi/mi$^2$. BLM would enhance and improve big game winter range by protecting and restoring mountain mahogany stands where conifers have become established. BLM would proactively restore the distribution and vigor of bitterbrush stands through vegetative treatments designed to reduce competing plants, to create a variety of age classes, and to create conditions conducive to bitterbrush natural regeneration.

In concert with the timber management program, a snag management program would be implemented to enhance habitat for cavity nesting birds.

Fences identified as barriers to wildlife movement would be considered for removal or reconstruction on a case by case basis to follow BLM fence specifications for wildlife. Noise disturbance and management activities would be avoided or minimized within 0.25 mile of raptor nests during the nesting and brood rearing period.

Unoccupied raptor nests (on cliffs, rocky outcrops or in trees) would be protected from removal or destruction for 3 years, or the period a known preferred prey species fluctuates from population highs to lows. Nests would not have to be retained if physically damaged past the point of repair by raptors. In forested habitat types, a 0.25 mile buffer of suitable habitat would be maintained around unoccupied nests for three years.

Genetically pure and slightly hybridized (less than 10 percent hybridization) westslope cutthroat trout populations would be protected by maintaining or restoring high-quality habitats and by expanding populations.

To prevent spread of non-native, invasive aquatic species, BLM would install boat wash stations at all major boating access sites.

# TRAVEL MANAGEMENT AND ACCESS

Travel management and access is addressed at two levels. Proposed management is described at the Field Office level as part of the RMP decisions to be made. In addition, there are five Travel Planning Areas (TPAs) for which site-specific management by individual travel routes is proposed by alternative. Site-specific travel plan implementation decisions for each of these five areas will be made separately from the RMP level decisions.

The vision for travel management is to provide for a range of quality motorized and non-motorized opportunities.

**Goal –** Provide a balanced approach to travel management that provides a sustained flow of local economic benefits, minimizes user conflicts, safety concerns, and resource impacts while taking into consideration the unique attributes and values of the various Travel Planning Areas.

## FIELD OFFICE LEVEL

### Management Common to All Alternatives

Regulations at 43CFR8340 through 43CFR8342.3 would be applied in identifying area designations Field Office-wide and in identifying route-specific management where activity plan level decisions would be made for specific travel routes.

Travel management would be conducted in a manner that would meet, or move toward meeting, Land Health Standards.

Areas within the Decision Area would be categorized as "Open", "Closed", and "Limited." An "Open" area is where all types of vehicle use are permitted at all times, anywhere in the area. A "Closed" designation means all motorized use is prohibited.

In accordance with the 2003 Statewide OHV ROD (USDI-BLM 2003c), under the "Limited" designation, all cross-country motorized, wheeled travel (including big game retrieval) is prohibited unless otherwise managed. In the absence of other existing travel plan direction, all motorized wheeled travel is restricted to existing roads and trails. However, the ROD provides several exceptions to this rule (refer to ROD, pages 4-5). Examples include:

1. Any military, fire, search and rescue, or law enforcement vehicle for emergency operations;
2. Official BLM administrative business (prescribed fire, noxious weed control, range management, etc.);
3. Other government agency business (surveying, animal damage control, etc.);
4. Administration of a federal lease or permit (e.g., livestock permittee maintaining fence, delivering salt, etc.); and,
5. For dispersed camping within 300 feet of an existing open road. Site selection must be completed by non-motorized means, and accessed by the most direct route causing the least damage.

Comprehensive inventories of all existing routes would be used.

Travel Planning Areas that has existing travel plans are:

1. Elkhorn Mountains – "limited" area designation – (with the exception of an approximately 631.88 acre "open" OHV use area near Radersburg);
2. Clancy-Unionville – "limited" area designation;
3. Whitetail-Pipestone – "limited" area designation – (with the exception of an approximately 5 acre "open" motorized motorcycle hill climb area); and,
4. Sleeping Giant – "limited" area designation.

Additional travel planning has been completed for several smaller "sub-planning" areas; Confederate Gulch, Sawlog Creek, the Great Divide Ski area, and Nez Perce Ridge Road. Several "temporary area closures" are in effect as well, pending future travel planning. The temporary area closures include the North Hills, Sawmill Gulch, Ward Ranch, the McMasters, Spokane Hills, and Iron Mask. Each of these areas is being brought forward under the Limited area designation.

No site specific route management changes have been proposed for the Confederate Gulch, Great Divide Ski Area, Nez Perce Road, and Sawmill Gulch areas. However site specific route management changes have been proposed for the Sawlog Creek, North Hills, Ward Ranch, McMasters, and Spokane Hills. (See site specific activity travel plan alternatives).

In accordance with the 2003 Statewide OHV ROD and plan amendment, nine additional areas, all with "limited" area designations have been identified that need site-specific travel planning. The nine proposed areas are:

1. Helena (focus area – Scratchgravel Hills). High Priority;
2. East Helena (focus area – North Hills). High Priority;
3. Lewis and Clark Country Northwest (focus area – Marysville). High Priority;
4. Boulder/Jefferson City. High Priority;
5. Upper Big Hole River. High Priority;
6. Missouri River Foothills. Moderate Priority;

7. Jefferson County Southeast. Moderate Priority;
8. Broadwater County South. Moderate Priority; and,
9. Park/Gallatin. Moderate Priority

The five high priority areas are being addressed at the activity plan level concurrently with this RMP revision. Travel planning for high priority areas is supposed to be initiated within two years of the OHV ROD, and moderate priority areas within five years of the OHV ROD. (Refer to the OHV ROD for complete details).

Existing routes would be evaluated for adequacy, relevance, and impacts to resources and resource uses. A range of travel management opportunities that provide a balanced approach among motorized, mechanized, and non-motorized use would be developed.

BLM would use a range of route management options, including Open Yearlong, Open with Restrictions, Closed Yearlong, and Decommissioned (**Table 2-6**).

- Open Yearlong - open year-round to public and administrative uses.
- Open with Restrictions - open to public and administrative uses with seasonal and/or vehicle type limitations.
- Closed Yearlong - closed to motorized public access and subject to administrative or permitted uses based on case-specific exceptions (such as for mining claimants with existing claims accessed by existing routes). Routes identified as closed would have a route bed left intact in case they are needed for valid existing rights only, or in the extended future for administrative purposes. Closed routes would be open to non-motorized use.
- Decommissioned - route is closed and rehabilitated to eliminate resource impacts (for example, to eliminate erosion or to restore a riparian area if route is located within a riparian area) and is no longer useable for public or administrative uses.

Opportunities would be sought to disperse or distribute users to help provide a quality recreational experience.

Easement agreements would be pursued as needed to gain agency and public access to BLM lands.

BLM would provide for interagency travel management consistency and route connectivity with adjoining public lands.

Throughout the course of implementing the RMP, site-specific route management decisions may need to be re-evaluated and adjusted by BLM in order to accommodate interagency (Forest Service) connectivity. Proposed changes would be addressed on a case-by-case basis by an interdisciplinary team.

**Table 2-6**
**Field Office Level Route Management Summary**

| Route Management Category | Alt. A miles | Alt. B miles | Alt. C miles | Alt. D miles |
|---|---|---|---|---|
| Administrative Access Only | 0.8 | 0.8 | 0.8 | 0.8 |
| Open Yearlong | 471.8 | 263.0 | 244.3 | 304.8 |
| Open/Restricted as Follows: | | | | |
| Closed 2/14 to 4/16 | 0 | 3.3 | 0 | 0 |
| Closed 9/1 to 12/1 | 0 | 0 | 0 | 3.6 |
| Closed 10/2 to 5/15 | 0.7 | 0.7 | 0.7 | 0.7 |
| Closed 10/15 to 12/1 | 34.8 | 2.1 | 2.1 | 1.9 |
| Closed 10/15 to 5/15 | 12.1 | 19.1 | 7.1 | 13.0 |
| Closed 12/2 to 4/15 | 2.2 | 2.2 | 1.9 | 0 |
| Closed 12/2 to 5/15 | 100.8 | 117.9 | 109.0 | 144.3 |
| Closed 12/2 to 6/15 | 5.0 | 5.8 | 5.4 | 7.6 |
| Closed 12/2 to 7/15 | 0 | 0.8 | 0 | 0.9 |
| Closed 12/2 to 10/5 | 1.9 | 1.9 | 1.9 | 1.9 |
| Sub-Total Road Miles Open to Public | 629.2 | 416.8 | 372.4 | 478.6 |
| Closed Yearlong | 172.0 | 317.7 | 375.2 | 266.2 |
| Decommission | 0 | 52.6 | 50.1 | 43.4 |
| Snowmobile Only | 0 | 4.3 | 3.5 | 4.6 |
| Trails | 14.5 | 14.5 | 14.5 | 14.5 |
| Game Retrieval Only | 10.7 | 18.9 | 10.7 | 17.8 |
| Motorcycles Only | 6.1 | 6.1 | 6.1 | 6.1 |
| ATV Only | 18.8 | 18.8 | 18.8 | 21.0 |
| ATV Only Closed 10/15 to 12/1 | 0 | 1.5 | 0 | 0 |
| ATV Only Closed 12/2 to 4/1 | 4.3 | 4.3 | 4.3 | 4.3 |
| **Totals** | **856.4** | **856.4** | **856.4** | **857.3** |

All Designated routes would be mapped and signed as Open, or Open with restrictions (seasonal use restriction, vehicle type use restriction, etc.), instead of taking the opposite approach and signing all closed routes as Closed. In other words, unless a route is specifically signed as Open (or Open with Restrictions), it is closed to motorized use, regardless of whether or not a route Closure sign is in place. This "Closed unless signed as Open" approach places a higher level of burden on the user to be cognizant of where, when, and how they are allowed to travel on public lands. It also eliminates a common act of vandalism, removing route closure signs in order to establish de facto "open" routes. Even so, BLM may still elect to use occasional route Closure signs as needed in areas experiencing compliance problems. Designated routes will be identified and signing using a combination of Portal signs, bulletin boards (posted travel plan maps), and designated route "arrow" symbols.

BLM would continue to participate with the Southwest Montana Interagency Travel Management Committee, maintaining map and sign consistency, and seasonal restrictions.

BLM would continue to partner with the State Trails Program, seeking opportunities to improve existing as well as future trails and facilities.

As roads and trails identified for decommissioning in site-specific travel plans are prioritized, site inventories would be conducted on cultural resources. To provide protection for known cultural resources and those yet to be discovered, sites would be evaluated to determine eligibility for National Register of Historic Places. Ineligible heritage sites would be preserved in place if possible. If adverse effects threaten a site (on roads proposed for closure or open roads), one or more mitigation measures would be employed to lessen or avoid those effects.

These may include:

- Abandon the project.
- Redesign the project to avoid adverse effect with protective measures such as signing, fencing, reroute, or closure of road/trail.
- Data recovery and analysis that could require temporary closure of the area.
- Avoidance by re-routing.

BLM roads within the travel area would continue to be available for a multitude of motorized vehicle travel (2-wheel, 4-wheel, motorcycles, all-terrain vehicles, and snowmobiles), provided safety concerns remain minimal. Should traffic volumes or user conflicts become prevalent and warrant restrictions, then priority would be given to vehicles legally registered to travel on public highways.

In accordance with interagency trail width guidelines, all BLM Designated OHV trails, bridges, and cattleguards are designed to accommodate OHV vehicles 50 inches in width or less. Vehicles wider than 50 inches will be unable to navigate BLM trails; and by default, will be in violation of the off road travel rule.

Variances to travel plan designations may be issued on a case-by-case basis to conduct essential agency administrative actions and site-specific approved uses such as casual use mineral exploration. (Refer to **Appendix A** for details)

Wheeled motorized vehicle travel would be allowed for any military, fire, search and rescue, or law enforcement vehicle for emergency operations.

Temporary routes could be constructed where needed and where other routes are not available under approved travel management plans. Construction of such routes would be to minimal standards, adhering to BMPs (**Appendix E – BMPs**). Temporary routes are not intended to be part of the permanent or designated transportation network system and must be reclaimed when their intended purpose has been fulfilled. Complete reclamation of all temporary routes may not be desired or necessary in all situations. However, unless they are specifically intended for public use, they should not be made available for that use.

BLM would minimize establishing travel routes in areas identified at risk for noxious weed infestations.

In areas with sensitive soils, BLM would minimize establishing new routes and would consider closure, restriction (season or type of use), mitigation (relocation, reconstruction, etc.), or administrative management of existing travel routes.

Travel analysis would be conducted on those routes documented during the inventory period. User-made routes determined to have been created since the inventory would not be brought forward for analysis and therefore are treated as if they are decommissioned.

Short, site-specific sections of road/trail re-alignment, or reconstruction would continue to be implemented as needed to minimize resource damage and/or provide minor reroutes around private property.

BLM manages a number of designated routes where public motorized access is contingent upon the governing consent of their adjoining landowner(s). In these situations, BLM will exercise a reciprocal "All or None road use policy". This means that as long as the public is allowed access to these roads, no changes in travel management would occur. However, should the adjacent landowner refuse public access, then BLM would reciprocate by closing its roads to their use as well.

## Alternative A – No Action

All existing travel plans, including the sub-Planning Areas, temporary area closures, and the interagency cooperative mapping effort (Southwest Montana Interagency Visitor/Travel Map) would be brought forward and remain in effect. Travel management for the remainder of the BFO would continue in accordance with the 2003 Statewide OHV ROD.

The ROD did not address snowmobile use. Under Alternative A, all existing snowmobile management would remain in effect. Existing management varies, and includes: unrestricted area cross-country travel (conditions permitting), seasonally restricted area cross-country travel, travel on all wheeled designated routes (during the season of use, December 2 through May 15), and snowmobile use only routes.

Area designations of "Open", "Closed", and "Limited" under Alternative A are characterized in **Table 2-7.**

**Table 2-7**
**Alternative A Field Office Wide Acres of Open, Closed and Limited Area Designations**

| Designations | Acres[1] |
|---|---|
| **Wheeled Vehicles** | |
| Open | 4,367 |
| Closed | 31,500 |
| Limited | 271,442 |
| **Snowmobiles** | |
| Open | 143,206 |
| Closed | 27,065 |
| Limited | 137,038 |

[1] Acres are approximate.

Applications for competitive, as well as non-competitive organized motorized events would continue to be evaluated on a case by case basis, subject to NEPA analysis. Areas not available to competitive motorized events would include those along lands along the Jefferson, Missouri Rivers, the Beartooth Game Range, the Sleeping Giant area, the Elkhorn Mountains, the Toston/Lombard area, Whitetail/Pipestone, Sheep Mountain, and all WSAs.

Cattle guards/gates would be installed on newly constructed roads/trails as needed.

Road and trail maintenance costs would be expected to continue at the same level.

## Management Common to Action Alternatives (B, C, and D)

Area designations Field Office wide would be the same for Alternatives B, C, and D for wheeled vehicles but would vary by alternative for snowmobiles as depicted in **Table 2-8**.

**Table 2-8**
**All Action Alternatives (B, C, and D)**
**Acres of Open, Closed and Limited Area Designations**

| Designations | Acres[1] |
|---|---|
| **Wheeled Vehicles (Alternative B, C, and D)** | |
| Open | 283 |
| Closed | 31,500 |
| Limited | 275,526 |
| **Snowmobiles** | |
| **Alternative B** | |
| Open | 112,682 |
| Closed | 54,706 |
| Limited | 139,921 |
| **Alternative C** | |
| Open | 26,148 |
| Closed | 65,270 |
| Limited | 215,891 |
| **Alternative D** | |
| Open | 139,138 |
| Closed | 31,282 |
| Limited | 136,889 |

[1] Acres are approximate.

BLM would maintain current management of existing TPAs and area designations, with the following three exceptions, and one qualification. The exceptions are:

1. The small, scattered open areas located within the Elkhorn Mountains would be converted from open to limited. Existing routes located within the converted areas would remain open to the public;
2. A small (less than one acre) "warm up" area located in the Whitetail-Pipestone Travel Planning Area would be converted from open to limited; and,
3. Approximately one half of the 632-acre Radersburg open OHV use area would be converted from open to limited.

Regarding the qualification, the motorcycle hill climb located in the Whitetail-Pipestone Travel Planning Area would continue to be managed as open, unless resource problems warrant a change in designation at a later time. In addition, the recently acquired Iron Mask property has been proposed to be managed under the limited area designation. If approved, site-specific travel management planning will need to be conducted subsequent to the limited area designation, and will require an amendment to the Elkhorns Travel Plan. These acres are not reflected in **Table 2-8** pending the RMP level decision and remaining pending land acquisition in this same area.

In the context of route-specific travel planning within individual TPAs, BLM's objective would be to use a systematic process that considers the unique resource issues and social environments of each TPA. Specific attributes analyzed would be based on written criteria developed from public and interdisciplinary team input. Areas or sub-areas not analyzed for route-specific management during the course of the RMP revision (due to complexity, controversy, lack of data, or time constraints) would be initiated within five years. Pending their completion, the BLM would, to the extent possible, provide preliminary maps and interim travel management guidelines.

Where private landowners have demonstrated willingness to provide public access across their lands, BLM has shown public access from BLM lands across such private lands in travel plans. Exceptions include routes that BLM has proposed as closed, or are known to be posted or otherwise closed to the public by private property owners. The public must realize that BLM has no control over private roads traveling through private land, and that access across private land is subject to change. A full range of management options would be used for limited designations. Site-specific route management options include: travel limited to designated routes, types or modes of travel such as foot, equestrian, bicycle, motorized; limited to time or season of use; limited to certain types of vehicles (motorcycles, all-terrain vehicles, high clearance, full-size street-legal, etc.); limited to permitted vehicles or users, limited to BLM administrative use only, and other types of limitations as needed. Some pre-existing routes would be closed or decommissioned based on route-by-route travel planning evaluations. Some decommissioned routes would be closed and rehabilitated to blend with the natural surroundings, while others would be permanently closed using earthen berms, fallen trees, or other techniques. All techniques used to decommission roads would eliminate resource impacts.

BLM would cooperate with the MFWP, adjusting seasonal travel restrictions in accordance with big game hunting season extensions.

Roads and trails closed yearlong that are not needed for specific authorized uses (fire prevention/suppression, mining claims, access to private lands, non-motorized travel, etc.) would be rehabilitated to blend into the surrounding area. Roads subject to special uses under authorized exceptions would be stabilized to prevent unnecessary and undue soil erosion and water quality degradation. A priority list for work would be developed after each travel plan is completed.

Travel route densities would conform to the management prescriptions in the wildlife section in the RMP.

Loop-road connections would be established, where appropriate, to enhance public access and enjoyment.

The BLM would emphasize management of the transportation system to reduce impacts to natural resources from authorized roads and trails. The BLM would also stress closing and restoring unauthorized user created roads and trails to prevent resource damage. Ecologically sensitive areas within 300 feet of roads and trails could be closed to dispersed camping if resource damage is found to be occurring in these areas.

Snowmobile use would be subject to restrictions outlined in specific travel plans. It is the rider's responsibility to avoid locations where wind or topographic conditions may have reduced snow depth and created situations where damage to vegetation or soils could occur, or where vegetation is taller than the protective snow cover. Ecologically sensitive areas could be closed to snowmobiling if resource damage caused or exacerbated by snowmobile activity is found to be occurring in these areas.

## Alternative B – Preferred Alternative

Opportunities for motorized access across the Planning Area (**Table 2-8**) would be less than with Alternatives A and D, but greater than with Alternative C.

Organized competitive and non-competitive motorized events would be considered and evaluated on a case-by-case basis for the Pipestone area only (existing management). Non-competitive motorized events would not be allowed outside Pipestone. However, competitive motorized events (timed/speed based) proposed on BLM lands outside Pipestone would be considered, but only if held in conjunction with use of adjacent lands (public or private).

With some exceptions (see site specific travel plan alternatives), cross-country snowmobile use would be allowed, as well as travel on all existing routes during the season of use (December 2 – May 15), snow conditions permitting.

BLM would actively seek agency and public easement agreements in order to maintain current access for popularly traveled routes, and seek additional site-specific opportunities as needed.

BLM would replace barbed wire gates (and similar closures) with cattle guards and/or easily operated metal gates wherever problems are known to occur.

The southern portion of Spokane Hills (East Helena TPA) would be available for motorized access by "hunters with a disability". See the Alternative B description for the East Helena TPA for details.

## Alternative C

A lower level of motorized access would be provided as Alternative B, with more yearlong closures than any other alternative (**Table 2-8**).

Competitive and organized motorized events would not be allowed.

Unless otherwise managed, snowmobile use would be restricted to designated routes only (open or open/restricted), during the season of use (12/2 to 5/15), snow conditions permitting.

BLM would seek public access easements as needed for new road or trail construction.

Cattle guards/gates would be installed on newly constructed roads/trails as needed.

With the exception of site specific road/trail realignment or reconstruction to minimize resource damage, no new road or trail construction is anticipated.

## Alternative D

Opportunities for motorized access Field Office-wide would be less than for Alternative A, but more than for Alternatives B and C (**Table 2-8**).

Management for organized motorized events (competitive and non-competitive) would be the same as for Alternative B.

With some exceptions (see site-specific travel plan alternatives), cross-country snowmobile use would be allowed, as well as travel on all existing routes during the season of use (12/2 to 5/15), snow conditions permitting.

BLM would seek agency and public access easements for all locations where BLM routes are accessed either from, or cross private property.

BLM would replace barbed wire gates (and similar closures) with cattle guards and/or easily operated metal gates wherever they currently exist.

Increased levels of reconstruction and new construction would be necessary to restore deteriorated routes and provide additional loop routes.

## ACTIVITY LEVEL PLANNING FOR FIVE HIGH PRIORITY TRAVEL PLANNING AREAS

Nested within the Field Office-wide alternatives for travel planning, there are five TPAs for which site-specific travel plan alternatives have been developed. These areas include: Helena, East Helena, Lewis and Clark County NW, Boulder/Jefferson City, and Upper Big Hole River. The following discussion describes these site-specific travel plan alternatives by RMP alternative.

*With this document there are two different map formats for site-specific travel plan alternatives. Hard copy **Maps 6 through 25** in the map packet show one travel plan alternative for one Travel Planning Area per map. Due to size and scale limitations however, the hard copy maps do not include route numbers or snowmobile management because they would be too small to read.*

*Readers interested in viewing or commenting on numbered routes or snowmobile management will need to refer to the electronic maps on the enclosed compact disk, using the enclosed Adobe Reader software. These maps are located in the "Travel Plan Maps" folder on the disk. In addition to individual route numbers, the electronic maps display geographical locations (road names, towns, streams, mountains, etc.) that will help orient the reader to the Travel Planning Area. The Adobe Reader software allows the reader to search for specific route numbers, "pan" the map, and zoom in on selected features as needed. For both the Helena and Boulder/Jefferson City Travel Planning Areas, each alternative for each of these areas is represented by one electronic map. However, due to the size of the other Travel Planning Areas and scattered distribution of BLM lands there, the remaining Travel Planning Areas are subdivided into sub-areas with one electronic map for each alternative for each sub-area. The East Helena Travel Planning Area is subdivided into four sub-areas. The Upper Big Hole River Travel Planning Area is subdivided into three sub-areas, while the Lewis and Clark County NW Travel Planning Area is subdivided into two sub-areas.*

*The electronic maps are not numbered, but are instead titled by Travel Planning Area name, sub-area name if needed, and alternative. For example, the title of the electronic map for Alternative B of the Ward Ranch sub-area of the East Helena Travel Planning Area is "East Helena Ward Ranch Alt B.PDF". Names of sub-areas are provided in site-specific descriptions of travel plan alternatives below.*

## General Overview of Alternative A for Site-Specific Plans

Any existing travel planning for the five TPAs would be brought forward. Existing planning includes "sub-planning" for the Big Hole (Southwest Interagency mapping effort), Sawlog Creek, Great Divide Ski area, and Nez Perce Ridge Road areas. Several "temporary area closures" are in effect as well, including the North Hills, Sawmill Gulch, Ward Ranch, the McMasters, and Spokane Hills.

Additional travel management would continue in accordance with the 2003 Statewide OHV ROD (refer to "Field Office Level Alternative A" for details). Under the ROD, in the absence of other existing travel plan direction, all motorized wheeled travel is restricted to existing roads and trails. An exception allows for motorized wheeled cross-country travel during any military, fire, search and rescue, or law enforcement emergency. The ROD did not address snowmobile use. Under Alternative A, existing snowmobile management would remain in effect. Under the existing management, cross country area use is allowed as well as travel on all existing routes during the season of use (12/2-5/15), snow conditions permitting.

Travel management costs (implementation, routine maintenance, and monitoring) would remain the same.

## Working Group Proposal Development

In an effort to help BLM develop site-specific travel management alternatives agreeable to the public as well as the agency, *community based collaborative working groups* were initiated. Two working groups representing a wide, "balanced" range of public land users were recruited and managed under the direct supervision and guidance of the Lewis and Clark County Board of Commissioners. One of the groups was assigned to assist with travel planning for the Helena (Scratchgravel Hills) and East Helena (North Hills) TPAs, and the other for the Lewis and Clark County NW (Marysville) TPA. Membership criteria included: Montana residency, familiarity with the Travel Planning Area(s), and a willingness to work collaboratively with people of differing viewpoints. Members were selected from three different interest categories (in accordance with the Western Montana Resource Advisory Council criteria) in order to provide for balanced representation.

Refer to **Appendix A – Travel Planning** for further details on membership selection, and working group process. Each group held a series of five or six meetings. The meetings were attended by BLM representatives available to answer questions, provide information and feedback from the BLM's interdisciplinary team, and provide written materials and maps as needed. Group recommendations for route-specific management were based on consensus. In the end, the working groups arrived at complete consensus for the Marysville (subset of Lewis and Clark County NW TPA) and North Hills (subset of East Helena TPA) areas, but only partial consensus for the Scratchgravel Hills (subset of Helena TPA) area. BLM incorporated working group recommendations into Alternative B for the three TPAs.

## Helena Travel Planning Area

**Maps 6 through 9** are the hard copy maps for the Helena TPA alternatives. Electronic maps by alternative showing route numbers are located in the Travel Planning Maps folder on the enclosed disk.

### *Alternative A – No Action*

Other than the 2003 Statewide OHV ROD, there is no existing travel plan management for the Helena Travel Planning Area. Under the ROD, all existing routes would continue to be open yearlong to wheeled motorized travel (**Map 6**). The ROD did not address snowmobile use; area wide cross-country snowmobile use would continue to be allowed as well as travel on all existing routes during the season of use (December 2-May 15), snow conditions permitting. Alternative A would provide the greatest amount of open roads in the Helena TPA (**Table 2-9**).

### *Alternative B – Preferred Alternative*

Travel planning for the Helena TPA focused on the Scratchgravel Hills area. BLM received numerous verbal, as well as written comments during two public scoping meetings for the Scratchgravel Hills area. Many of the comments concerned conflicts between motorized and non-motorized use. Due to the high degree of user conflicts and illegal activity taking place, the BLM has modified the Preferred Alternative for the Scratchgravel

**Table 2-9**
**Helena Travel Planning Area Miles of Road By Proposed Management Category For All Alternatives**

| | Alt. A | Alt. B | Alt. C | Alt. D |
|---|---|---|---|---|
| Area available for wheeled, motorized use (in Acres) | | | | |
| Open | 0 | 0 | 0 | 0 |
| Closed | 0 | 0 | 0 | 0 |
| Limited | 10,164 | 10,164 | 10,164 | 10,164 |
| Miles of wheeled motorized route: | | | | |
| Open Yearlong | 52.2 | 9.8 | 7.0 | 21.9 |
| Seasonally Restricted | 0 | 0 | 0 | 0 |
| Closed | 0 | 36.0 | 40.7 | 27.7 |
| Decommissioned | 0 | 6.5 | 4.6 | 3.1 |
| Area availability for snowmobile use (in Acres) | | | | |
| Open | 10,164 | 10,164 | 0 | 10,164 |
| Closed | 0 | 0 | 0 | 0 |
| Limited | 0 | 0 | 10,164 | 0 |
| Miles of motorized routes available to snowmobile travel | 52.2 | 52.2 | 7 | 52.2 |
| Miles of motorized routes available for snowmobile travel only | 0 | 0 | 0 | 0 |
| Miles of routes available for big game retrieval | 0 | 0 | 0 | 0 |
| Miles of routes available for disabled hunter access | 0 | 0 | 0 | 0 |
| Miles of non-motorized trails available | 0 | 38.6 | 45.3 | 30.8 |

Hills area so that all interior roads in the Scratchgravel Hills would be closed to public wheeled motorized travel yearlong at the five proposed trailheads, with the exception of a few perimeter right-of-way routes and routes to private residences (**Table 2-9, Map 7**). The BLM believes that the revised Preferred Alternative would reduce problems with dumping and illegal activities after dark, and would be more manageable and enforceable than the nighttime closure previously considered for this area in the Draft RMP/EIS.

Cross-country snowmobile use would be allowed, as well as travel on all existing routes during the season of use (December 2 – May 15), snow conditions permitting.

### *Alternative C*

Motorized access to the Scratchgravel Hills area would be restricted to the five existing trailheads (**Table 2-9**, **Map 8**). No motorized use would be allowed beyond the trailheads. No snowmobile use would be allowed, including the trailhead access routes.

### *Alternative D*

Approximately 41 percent of the existing routes would be available for motorized access.

The majority of the designated routes would be located in the Scratchgravel Hills area. Several new connector routes would need to be constructed; and several existing routes would require reconstruction (**Table 2-9, Map 9).**

Cross-country snowmobile use would be allowed, as well as travel on all existing routes during the season of use (12/2 – 5/15), snow conditions permitting.

## East Helena TPA

**Maps 10 through 13** are the hard copy maps for the entire East Helena TPA alternatives. Electronic maps showing route numbers are located in the Travel Planning Maps folder on the enclosed compact disk. There are four sub-areas for the East Helena TPA represented on electronic maps titled by alternative as: East Helena North Hills, East Helena Spokane Hills, East Helena Townsend, and East Helena Ward Ranch.

### *Alternative A – No Action*

Under Alternative A, with the exception of existing travel plan management, all existing routes would continue to be open yearlong to wheeled motorized travel as directed by the OHV ROD (**Table 2-10, Map 10**). Existing travel planning includes "temporary area closures" for the North Hills and the recent Ward Ranch, McMasters, and Spokane Hills acquisitions. The North Hills temporary area closure (interagency block hunting management area) restricts motorized access during the big game hunting season. The Ward Ranch, McMasters, and Spokane Hills temporary area closures restrict motorized access to several temporary trailheads, beyond which no motorized travel is allowed.

The ROD did not address snowmobile use. With the exception of the Ward Ranch, McMasters, and Spokane

**Table 2-10**
**East Helena Travel Planning Area Miles of Road by Proposed Management Category for All Alternatives**

| | Alt. A | Alt. B | Alt. C | Alt. D |
|---|---|---|---|---|
| Area available for wheeled, motorized use (in acres) | | | | |
| Open | 0 | 0 | 0 | 0 |
| Closed | 0 | 0 | 0 | 0 |
| Limited | 20,266 | 20,266 | 20,266 | 20,266 |
| Miles of wheeled motorized route: | | | | |
| Open Yearlong | 36.6 | 13.7 | 12.0 | 36.0 |
| Seasonally Restricted - | | | | |
| Closed 10/15 to 12/1 | 7.7 | 0 | 0 | 0 |
| Closed 9/1 to 12/1 | 0 | 0 | 0 | 1.95 |
| Closed 2/14 to 4/16 | 0 | 3.3 | 0 | 0 |
| Closed | 26.4 | 41.9 | 54.6 | 29.7 |
| Decommissioned | 0 | 4.7 | 4.0 | 3.1 |
| Area availability for snowmobile use (in acres) | | | | |
| Open | 15,066 | 6,362 | 0 | 14,461 |
| Closed | 1,588 | 13,904 | 0 | 5,805 |
| Limited | 3,612 | 0 | 20,266 | 0 |
| Miles of motorized routes available to snowmobile travel (in "Limited" areas during season of use, 12/2 to 5/15) | 44.3 | 21.50 | 12 | 47.5 |
| Miles of motorized routes available for snowmobile travel only | 0 | 0 | 0 | 0 |
| Miles of routes available for big game retrieval | 0 | 7.0 | 0 | 0 |
| Miles of routes available for disabled hunter access | 0 | 7.0 | 0 | 0 |
| Miles of non-motorized trails available[1] | 26.4 | 47.1 | 59.1 | 32.6 |

[1] includes all existing trails, as well as closed and decommissioned roads.

Hills temporary closures, the East Helena TPA would remain available to cross-country area snowmobile use, as well as travel on all existing routes during the season of use (December 2 – May 15), snow conditions permitting.

### *Alternative B – Preferred Alternative*

The Alternative B proposal represents a combined (merged) effort between the BLM and the community based collaborative working group for the North Hills sub-area. (**Table 2-10, Map 11**). Motorized opportunities would decrease compared to Alternatives A and D. Route 516 would be open yearlong, providing primary access to a non-motorized trailhead at the junction with Route 517. The remaining road network would be seasonally restricted from February 14 to April 16 to prevent soil erosion. An additional non-motorized trailhead would be established at the end of Route 50108. The existing interagency block management hunting area would continue to be managed as in Alternative A. (See electronic map **East Helena North Hills Alt B.PDF**)

With a few minor changes, the Alternative B proposal for the Ward Ranch, McMasters, and Spokane Hills areas would continue in accordance with the existing temporary area closures.

Minor changes for the Ward Ranch area include: Routes 050134 and 050137 would be open yearlong to the public up to the private property boundaries.

The Ward Ranch Trailhead would be brought forward as managed under Alternative A; with no motorized use allowed beyond the current trailhead location. For the McMasters area, motorized access would continue to be restricted to three established, non-motorized trailheads, per the existing temporary closure. Motorized access for the area located on the west side of Prickly Pear Creek (south of Black Sandy) would be restricted to several, primary residential access routes and two recreation use access routes (EH025, EH034). Motorized access to the "Big Bend" area (located northwest of Devils Elbow) would be restricted to route EH037. A non-motorized trailhead would be constructed on the ridge top, near the end of EH 037. (See electronic map **East Helena Ward Ranch Alt B.PDF**)

With the exception of two changes, management for the Spokane Hills area would continue in accordance with the temporary area closure. Under the existing temporary closure, motorized access is restricted to a non-motorized trailhead at the end of route EH087A. The two changes are as follows:

- The southern portion of Spokane Hills would be available for motorized access during the big game hunting season for persons with disabilities. During a two week period, a limited number of hunters possessing a valid Montana State Disabled Conservation License or Permit to Hunt from a Vehicle may be allowed to access the southern Spokane Hills area using identified routes. This access program would be managed through a permit system. The permit requirements or restrictions would be coordinated with the Montana Department of Fish, Wildlife and Parks to ensure hunter safety and a quality hunting experience.
- Outside the special hunt period, the general public would be allowed to use these same identified routes for game retrieval as identified in the East Helena Spokane Hills Travel Management Plan. One route would be available for public access in the Townsend sub-area.

Snowmobile management under Alternative B would be as follows: cross-country travel would be allowed, as well as travel on all existing routes (during the season of use 12/2 – 5/15, snow conditions permitting), for the North Hills, Dana's Bar, and the area located to the west of Prickly Pear Creek (refer to map). The remaining areas (e.g., McMaster Hills, Ward Ranch, and Spokane Hills, etc.) would be closed to all cross-country travel, including travel on existing roads and trails.

### *Alternative C*

Alternative C would provide the least amount of motorized access (**Table 2-10**, **Map 12**).

Routes 0516A and 0516 would provide yearlong access to the North Hills. No other motorized routes would be available in that sub-area. (See electronic map **East Helena North Hills Alt C.PDF**)

Motorized access for the Ward Ranch area would be the same as for Alternative B, except Route 050133A would remain closed at its current location, regardless if the Ward Ranch is vacated in the future. Visitors would park at the current motorized closure area, and walk approximately 0.25 mile to visit the ranch complex. (See electronic map **East Helena Ward Ranch Alt C.PDF**)

As in Alternative B, motorized access for the McMasters area would continue to be restricted to three established, non-motorized trailheads, per the existing temporary closure. There would be no motorized access to the "Big Bend" area. Motorized access for the area located on the west side of Prickly Pear Creek (south of Black Sandy) would be restricted to the primary residential access routes.

Access to the Spokane Hills area would be in accordance with the existing temporary area closure, where, motorized access is restricted to a non-motorized trailhead established at the end of route EH087A. (See electronic map **East Helena Spokane Hills Alt C.PDF**) As in Alternative B, the Townsend sub-area has one route available for public access.

Under Alternative C, snowmobile use would be restricted to designated routes during the season of use (12/2 – 5/15), snow conditions permitting.

### *Alternative D*

Alternative D provides the highest level of motorized access for the North Hills area of the action alternatives, and includes several designated routes not found under Alternative B (**Table 2-10**, **Map 13**). All of the designated routes would be open yearlong. A number of additional designated routes would be available yearlong, as well as one seasonally restricted route. (See routes EH502, EH050133A, EH057, and EH047). (See electronic map **East Helena North Hills Alt D.PDF**)

Motorized access for the McMasters area would increase as well. Under Alternatives A, B, and C, motorized access would be restricted to three established, non-motorized trailheads, however, under Alternative D, a yearlong motorized loop route would be available, accessed from the existing northeast area trailhead. (See routes EH065, EH068A/B, EH068, and EH070 for details). (See electronic map **East Helena Ward Ranch Alt D.PDF**) Motorized access for the area located on the west side of Prickly Pear Creek (south of Black Sandy) would be the same as for Alternative B, with one exception. Under Alternative D, route EH036 (located at the tip of Dana's Bar) would be open yearlong. (See electronic map **East Helena Ward Ranch Alt D.PDF**) Alternative D would provide two designated access routes for the *"Big Bend"* area. (See routes EH037 and EH041). (See electronic map **East Helena Ward Ranch Alt D.PDF**)

Alternative D would provide changes for the Spokane Hills area. Under Alternative D, routes EH 84, 85, 86, and 87 would be open yearlong. The existing trailhead would be relocated to a level bench top area near the end of route EH 084. (See electronic map **East Helena Spokane Hills Alt D.PDF**)

Alternative D would provide two additional, yearlong motorized routes for the Townsend sub-area (see routes EH095 and 96). (See electronic map **East Helena Townsend Alt D.PDF**)

Snowmobile management under Alternative D would be as follows: Cross-country travel would be allowed, as well as travel on all existing routes (during the season of use, 12/2 – 5/15, snow conditions permitting) for the North Hills, Dana's Bar, the area located to the west of Prickly Pear Creek, McMasters Hills, Spokane Hills, and Townsend area (refer to East Helena PDF maps). The Ward Ranch and the Big Bend areas would be closed to all cross-country snowmobile use as well as travel on designated routes.

## Lewis and Clark County NW TPA

**Maps 14 through 17** are the hard copy maps for the entire Lewis and Clark County NW TPA alternatives. Electronic maps showing route numbers are located in the Travel Planning Maps folder on the enclosed compact disk. There are two sub-areas for the Lewis and Clark County NW TPA represented on electronic maps titled by alternative as: Lewis and Clark Lincoln, and Lewis and Clark Marysville.

### *Alternative A – No Action*

With the exception of existing travel management for the Great Divide Ski (lease) Area, all existing routes would be open yearlong to wheeled motorized travel as directed by the OHV ROD (**Table 2-11, Map 14)**. Under current management, with the exception of one or two designated routes, routes located within the Great Divide Ski area would continue to be closed to wheeled vehicles as well as snowmobiles to prevent damage to the ski slopes and prevent conflicts with skiers. The ROD did not address snowmobile use, therefore, outside the Great Divide Ski Area, cross-country snowmobile use would continue to be allowed as well as travel on all existing routes during the season of use (12/2 – 5/15), snow conditions permitting.

### *Alternative B – Preferred Alternative*

The Marysville sub-area represents a combined effort between the BLM and the community-based collaborative working group. Under Alternative B, with the exception of a portion of the northwest corner of the Marysville area, all major motorized access routes would remain available to the public (**Table 2-11**, **Map 15**). The routes within the upper northwest portion would be closed to help provide big game security and protection for threatened and endangered species (grizzly bear, Canada lynx). Cross-country snowmobile travel would be allowed throughout the entire travel planning area, with two exceptions, within the Great Divide Ski area (existing management), and the area identified in the northwest portion of the TPA. Snowmobile use in these areas would be restricted to designated routes only during the season of use (12/2 – 5/15), snow conditions permitting.

The majority of routes in the Sieben Ranch area would remain available for public access, while most of the routes located in the Stemple Pass and Lincoln areas would be closed due to lack of public access and resource impact issues.

### *Alternative C*

There would be no motorized access allowed in the northwest portion of the Marysville area (**Table 2-11, Map 16**).

This alternative provides the least amount of motorized access throughout the TPA of all the alternatives. Snowmobile use would be restricted to designated routes (no cross country use allowed) during the season of use (12/2 – 5/15), snow conditions permitted. With the exception of one change for the Sieben Ranch area, motorized access for the Sieben Ranch, Stemple Pass, and Lincoln areas would be the same as Alternative B.

**Table 2-11**
**Lewis & Clark County NW Travel Planning Area Miles of Road**
**By Proposed Management Category For All Alternatives**

| | Alt. A | Alt. B | Alt. C | Alt. D |
|---|---|---|---|---|
| Area available for wheeled, motorized use (in Acres) | | | | |
| Open | 0 | 0 | 0 | 0 |
| Closed | 0 | 0 | 0 | 0 |
| Limited | 16,997 | 16,997 | 16,997 | 16,997 |
| Miles of wheeled motorized route: | | | | |
| Open Yearlong | 57.5 | 13.8 | 8.0 | 19.6 |
| Seasonally Restricted (Closed 12/2 to 5/15) | 6.7 | 14.3 | 11.7 | 14.5 |
| Closed | 3.4 | 26.8 | 41.6 | 20.3 |
| Decommissioned | 0 | 10.9 | 5.2 | 8.8 |
| Area availability for snowmobile use (in Acres) | | | | |
| Open | 16,112 | 12,649 | 0 | 12,649 |
| Closed | 888 | 888 | 888 | 888 |
| Limited | 0 | 3,463 | 16,112 | 3,463 |
| Miles of motorized routes available to snowmobile travel | 56.5 | 49 | 8 | 49 |
| Miles of motorized routes available for snowmobile travel only | 0 | 1.8 | 1.1 | 2.0 |
| Miles of routes available for big game retrieval | 0 | 0 | 0 | 0.5 |
| Miles of routes available for disabled hunter access | 0 | 0 | 0 | 0 |
| Miles of non-motorized trails available[1] | 5.3 | 37.7 | 46.7 | 29.1 |

[1] includes all existing trails, as well as closed and decommissioned roads

### *Alternative D*

This alternative provides the greatest amount of motorized access in this area than any of the other alternatives. Under Alternative D, several additional routes would be available for motorized access in the Marysville area (**Table 2-11**, **Map 17**). Examples include a yearlong ATV Only route and a game retrieval route (see routes 63, 65, and 050109 on electronic **Lewis and Clark Marysville Alt D.PDF** map). There would be an additional 2.2 miles of ATV Only route available in this alternative than the other alternatives. Cross-country snowmobile travel would be allowed throughout the entire travel planning area, with two exceptions: within the Great Divide Ski Area and within the area identified in the northwest portion of the TPA. Snowmobile use in these areas would be restricted to designated routes only during the season of use (12/2 to 5/15), snow conditions permitting.

Several additional open yearlong routes would be available for the Stemple Pass and Lincoln areas.

## Boulder/Jefferson City Travel Planning Area

**Maps 18 through 21** are the hard copy maps for the Boulder/Jefferson City TPA. Electronic maps for the entire TPA showing route numbers are located in the Travel Planning Maps folder on the enclosed CD.

### *Alternative A – No Action*

Other than the OHV ROD, there is no existing travel management for the Boulder/Jefferson City Travel Planning Area. Under the ROD, all existing routes would continue to be open yearlong to wheeled motorized travel (**Table 2-12, Map 18,** electronic map **Boulder Jefferson City Alt A.PDF**). The ROD did not address snowmobile use; area wide cross-country snowmobile use would continue to be allowed as well travel on all existing routes (December 2 – May 15), snow conditions permitting.

### *Alternative B – Preferred Alternative*

Under Alternative B, most major motorized access routes would remain available to the public. (**Table 2-12, Map 19,** electronic map **Boulder Jefferson City Alt B.PDF**), though fewer routes would be open than in Alternative A. Area wide cross-country snowmobile use would continue to be allowed, and travel on all existing routes during the season of use (12/2 – 5/15), snow conditions permitting.

### *Alternative C*

Alternative C provides slightly fewer motorized access opportunities than Alternative B (**Table 2-12**, **Map 20,** electronic map **Boulder Jefferson City Alt C.PDF**). The main difference would be for the southwest corner of the Travel Planning Area, where a number of routes are proposed for closure to enhance non-motorized recreation opportunities (see routes 5115, 510122, 510123A, and BJ040). Snowmobile use would be re-

stricted to designated routes during the season of use (December 2 – May 15), snow conditions permitting.

### *Alternative D*

Alternative D provides for the highest level of motorized access for the Boulder/Jefferson City TPA of the action alternatives, approximately 33 percent more routes than Alternative B (**Table 2-12, Map 21,** electronic map **Boulder Jefferson City Alt D.PDF**). Area wide cross-country snowmobile use would continue to be allowed, and travel on all existing routes during the season of use (12/2 – 5/15), snow conditions permitting.

## Upper Big Hole River Travel Planning Area

**Maps 22 through 25** are the hard copy maps showing the entire Upper Big Hole River TPA by alternative. Electronic maps showing route numbers are located in the Travel Planning Maps folder on the enclosed compact disk. There are three sub-areas for the Upper Big Hole River TPA represented on electronic maps titled by alternative as: Upper Big Hole Fishtrap, Upper Big Hole Humbug Spires, and Upper Big Hole Jimmie New.

### *Alternative A – No Action*

Existing management for the Upper Big Hole TPA includes the 1996 revised Southwest Montana Interagency Visitor/Travel Map agreement and the 2003 Statewide OHV ROD. The Visitor/Travel Map agreement is a coordinated interagency mapping effort, not a travel planning document per se. The map depicts area wide management as well as site-specific route management for wheeled vehicles as well as snowmobile use (see map). Under Alternative A, the Southwest Travel Plan continues to remain in effect with the exception of several areas, originally designated in 1993 as open to wheeled cross-country (off road) travel. In accordance with the ROD, these open designated areas have been converted to Limited. All existing routes located within these limited areas would continue to be managed as open yearlong to wheeled vehicles. Snowmobiles use within these same Limited areas would continue to be managed as open to area wide cross-country use as well as use on all existing routes during the season of use (12/2 – 5/15), snow conditions permitting (**Table 2-13, Map 22**).

### *Alternative B – Preferred Alternative*

Existing management under the Southwest Interagency travel plan would remain in effect in some sub-areas of the Upper Big Hole TPA, but would change in other areas. Several sub-areas of the Southwest Interagency travel plan, originally designated in 1993 as open to wheeled cross country (off road) travel, have been converted to a limited designation in accordance with the 2003 Statewide OHV ROD. By default, all existing routes within these converted limited areas are currently managed as open yearlong to wheeled vehicles. In many cases the management for these routes would change from open yearlong, to seasonally restricted (as needed) in order to maintain consistency with the Southwest Interagency travel plan (see **Table 2-13, Map 23**).

Under Alternative B, all major motorized access routes located between Humbug Spires and Camp Creek would

**Table 2-12**
**Boulder/Jefferson City Travel Planning Area Miles Of Road by Proposed Management Category For All Alternatives**

| | Alt. A | Alt. B | Alt. C | Alt. D |
|---|---|---|---|---|
| Area available for wheeled, motorized use (in Acres) | | | | |
| Open | 0 | 0 | 0 | 0 |
| Closed | 0 | 0 | 0 | 0 |
| Limited | 14,487 | 14,487 | 14,487 | 14,487 |
| Miles of wheeled motorized route: | | | | |
| Open Yearlong | 60.5 | 3.7 | 3.0 | 5.3 |
| Seasonally Restricted (Closed 12/2 to 5/15) | 0 | 25.1 | 20.5 | 32.8 |
| Closed | 0 | 29.0 | 34.2 | 20.6 |
| Decommissioned | 0 | 2.7 | 2.7 | 2.7 |
| Area availability for snowmobile use (in Acres) | | | | |
| Open | 14,487 | 14,487 | 0 | 14,487 |
| Closed | 0 | 0 | 0 | 0 |
| Limited | 0 | 0 | 14,487 | 0 |
| Miles of motorized routes available to snowmobile travel | 60.5 | 60.5 | 3 | 60.5 |
| Miles of motorized routes available for snowmobile travel only | 0 | 0 | 0 | 0 |
| Miles of routes available for big game retrieval | 0 | 0 | 0 | 0 |
| Miles of routes available for disabled hunter access | 0 | 0 | 0 | 0 |
| Miles of non-motorized trails available[1] | 0 | 33.2 | 36.9 | 23.3 |

[1] includes all existing trails, as well as closed and decommissioned roads

remain available to the public. Some existing seasonal use restrictions would be changed to enhance high elevation hunting opportunities (refer to routes 0200, 010113, 0115, and 0150). (See electronic map **Upper Big Hole Humbug Spires Alt B.PDF**)

Under Alternative B, most major motorized access routes located in the Jimmie New Creek area would remain available to the public. Existing management for the Nez Perce Ridge Road and the "temporary area closure" for Sawmill Gulch would remain in effect. Changes from Alternative A include a moderate reduction in road density for the area located north of Highway 43, bounded by the Johnson and Jerry Creek access routes. The reduction in road density would help provide big game security as well as enhanced opportunities for non-motorized recreation. (See electronic map **Upper Big Hole Jimmie New Alt B.PDF**)

For the Fishtrap Creek area, the most notable change from Alternative A concerns Sawlog Gulch, a popular big game hunting area located approximately 2 miles southwest of the Fishtrap fishing access site on the south side of the Big Hole River. Under existing management (Alternative A), yearlong motorized access is allowed (fording the river). Under Alternative B, motorized wheeled vehicle access would be seasonally restricted (closed 12/2 to 7/15). (See Route 189009B on electronic map **Upper Big Hole Fishtrap Alt B.PDF**)

This change would help prevent resource damage by minimizing the number of vehicular crossings of the Big Hole River, improve big game security, and help provide public safety during high water conditions (spring runoff).

Note: If possible, in the future BLM would like to close route #189009b, and provide alternate access to the Sawlog area via route BH252 or routes BH189003 and BH001. Route BH252 is the preferable alternate access route. BH252 provides a safer river crossing and quicker access to the higher elevations that most users (big game hunters) seek. Access via route BH252 will require USFS and State cooperation; the USFS has already indicated its cooperation. Routes BH189003 and BH001 eliminate the need for a river crossing; but require several miles of travel in order to reach the Sawlog area. Access across these routes is largely dependent on private property cooperation.

Under Alternative B, existing snowmobile management would continue to remain substantially in effect as represented by the 1996 Southwest Interagency Visitor/ Travel Map. However, several additional areas would be closed to cross-country travel, and others restricted to existing designated routes and trails during the season of use (December 2 – May 15), snow conditions permitting. Proposed cross-country closures include the area located between the Soap Gulch and Camp Creek roads, the Goat Mountain / Maiden Rock area and the Sawmill

**Table 2-13**
**Upper Big Hole Travel Planning Area Miles Of Road By Proposed Management Category For All Alternatives**

| | Alt. A | Alt. B | Alt. C | Alt. D |
|---|---|---|---|---|
| Area available for wheeled, motorized use (in acres) | | | | |
| Open | 0 | 0 | 0 | 0 |
| Closed | 0 | 0 | 0 | 0 |
| Limited | 63,249 | 63,249 | 63,249 | 63,249 |
| Miles of wheeled motorized route: | | | | |
| Open Yearlong | 70.6 | 26.9 | 19.2 | 26.8 |
| Seasonally Restricted (Total) | 88.0 | 57.9 | 40.8 | 70.6 |
| Closed 9/1 to 12/1 | 0 | 0 | 0 | 1.6 |
| Closed 10/15 to 12/1 | 25.2 | 0.2 | 0.2 | 0 |
| Closed 10/15 to 5/15 | 10.5 | 17.6 | 5.5 | 11.4 |
| Closed 12/2 to 4/15 | 2.2 | 2.2 | 1.9 | 0 |
| Closed 12/2 to 5/15 | 50.2 | 34.6 | 32.8 | 54.1 |
| Closed 12/2 to 6/15 | 0 | 0.9 | 0.4 | 2.6 |
| Closed 12/2 to 7/15 | 0 | 0.8 | 0 | 0.9 |
| Closed | 7.4 | 49.2 | 69.3 | 33.2 |
| Decommissioned | 0 | 27.7 | 33.5 | 25.7 |
| Area availability for snowmobile use (in acres) | | | | |
| Open | 31,600 | 13,243 | 0 | 31,600 |
| Closed | 31,607 | 46,932 | 31,607 | 31,607 |
| Limited | 0 | 3,032 | 31,600 | 0 |
| Miles of motorized routes available to snowmobile travel | 90.2 | 53 | 14 | 90.2 |
| Miles of motorized routes available for snowmobile travel only | 0 | 2.5 | 2.4 | 2.5 |
| Miles of routes available for big game retrieval | 0 | 1.1 | 0 | 6.6 |
| Miles of routes available for disabled hunter access | 0 | 0 | 0 | 0 |
| Miles of non-motorized trails available[1] | 11.0 | 83.5 | 106.9 | 62.9 |

[1]Includes all existing trails, as well as closed and decommissioned roads

Gulch/Nez Perce Ridge area. Snowmobile use in the Dewey area would be restricted to designated routes and trails during the season of use (12/2 – 5/15), snow conditions permitting.

### *Alternative C*

Alternative C would provide moderately fewer motorized access opportunities than for Alternative B (**Table 2-13, Map 24C**). Under Alternative C, big game security and non-motorized recreational opportunities would be enhanced through additional route closures.

Most major motorized access routes located in the Humbug Spires area would remain available to the public. Differences from Alternatives A and B include additional yearlong closures for the high elevation routes located between the Soap Gulch and Camp Creek travel corridors. Examples include routes 0110, 010119, 127, 010115, 138, and 139. (See electronic map **Upper Big Hole Humbug Spires Alt C.PDF**)

Most major motorized access routes located in the Jimmie New Creek area would remain available to the public. Existing management for the Nez Perce Ridge Road; and the "temporary area closure" for Sawmill Gulch would remain in effect. Differences include additional yearlong closures for the area located north of Highway 43, bounded by the Johnson and Jerry Creek access routes. See routes 10109 and 033. (See electronic map **Upper Big Hole Jimmie New Alt C.PDF**)

The reduction in road density would help provide Big Game security as well as enhanced opportunities for non-motorized recreation. For the Fishtrap Creek area, the most notable change from Alternatives B and C concerns Sawlog Gulch. Under Alternative C, the Sawlog Gulch route (189009B) would be closed yearlong. (See electronic map **Upper Big Hole Fishtrap Alt C.PDF**) For areas open to snowmobile use under the Southwest Montana Interagency Visitor/Travel Map, travel would be restricted to designated routes only. No cross-country travel would be allowed.

### *Alternative D*

Alternative D provides the highest level of motorized access for the Planning Area of all the action alternatives, approximately 33 percent more routes than found under Alternative B (**Table 2-13, Map 25**).

Several additional routes would be available compared to Alternatives B and C for the Humbug Spires area. Other differences include adjusting existing seasonal route restrictions to allow for high elevation big game hunting access. Examples include routes 0110, 010119,122, 123, 141, and 148. (See electronic map **Upper Big Hole Humbug Spires Alt D.PDF**)

Under Alternative D, several additional routes would be available for the Jimmie New Creek area, including game retrieval routes. Notable examples include routes 010100, 032, 010101, 010102, 010110, 189012, 189016, 026, and 051. (See electronic map **Upper Big Hole Jimmie New Alt D.PDF**)

For the Fishtrap Creek area, the Sawlog Gulch route (189009B) would be managed the same as under Alternative B, open/restricted, with a seasonal closure from 12/2 to 7/15. (See electronic map **Upper Big Hole Fishtrap Alt D.PDF**)

Snowmobile management would be the same as described for Alternative A.

## TRANSPORTATION AND FACILITIES

**Goal 1 –** Maintain facilities, roads, and trails to provide for public and/or administrative use and safety while mitigating impacts to resources.

## Management Common to All Alternatives

Transportation and road management activity would meet, or move toward meeting Land Health Standards.

Comprehensive assessments would be conducted for all maintained roads and facilities and maintenance actions would be implemented as needed.

Roads and trails would be maintained in accordance with Travel Management Plan guidance and BLM policy. After site-specific travel plan decisions are made, roads included in the transportation system would be assigned maintenance levels, if needed. Roads would be managed in accordance with assigned maintenance levels and in consideration of resource issues. All roads and trails would be maintained in accordance with standards and guidelines in BLM Handbook 9113-2 and Manual Section 9114 respectively. Roads and trails would be inspected on an established schedule in accordance with the Bureau's Condition Assessment guidance.

Recreation sites, administrative sites, buildings, and bridges would be maintained within Bureau standards to reduce deferred maintenance costs; meet public health and safety requirements; provide universal accessibility as appropriate and to enhance visitor experiences. These activities would be coordinated with other federal, state, and local government agencies, private landowners and the general public as needed.

New roads and trails determined to be necessary for permanent or long-term use as part of BLM's transportation system would be constructed subject to NEPA and approved engineering standards. Consideration would be given to use demands, location, safety, and resource constraints when determining the level of road necessary, in accordance with Manual Section 9113. Where a new permanent road would provide better access, existing routes in the vicinity would be identified for closure and decommissioning in order to meet travel plan guidance and resource mitigation concerns (wildlife dis-

placement, habitat fragmentation, VRM, ROS, soil stability, water quality, etc).

## Management Common to Action Alternatives (B, C, and D)

Roads would be built to the minimum standard necessary that allows reasonable access and has the least impact on resource values.

If an existing road is substantially contributing to the standards not being met, the road would be considered for redesign, closure, or decommissioning to minimize the adverse impacts.

## Alternative B – Preferred Alternative

Road designs would include at a minimum:

- Minimizing road and landing locations in Riparian Management Zones;
- Minimizing sediment delivery to streams from road surfaces;
- Outsloping roadway surfaces where possible, except in cases where outsloping would increase sediment delivery to streams or where outsloping is infeasible or unsafe;
- Routing road drainage away from potentially unstable stream channels, fills and hill slopes;
- Minimizing disruption of natural hydrologic flow paths; and,
- Minimizing sidecasting of soil or snow.

Roads would be designed and maintained in a manner that provides for water quality protection by controlling placement of fill material, keeping drainage facilities open, installing and maintaining appropriately-sized culverts at stream crossings, and by repairing ruts and failures to reduce erosion and sedimentation of aquatic habitats.

## Alternative C

Road design considerations would include the same items listed above in Alternative B.

Roads would be designed and maintained in a manner that provides for water quality protection by controlling placement of fill material, keeping drainage facilities open, installing and maintaining stream crossings capable of accommodating 100-year storm events including associated sediment and debris, and by repairing ruts and failures to reduce erosion and sedimentation of aquatic habitats.

## Alternative D

Transportation and road management activity would meet, or move toward meeting Land Health Standards. Road designs would consider at a minimum:

- Minimizing road and landing locations in Streamside Management Zones;
- Minimizing sediment delivery to streams from roads surfaces;
- Outsloping roadway surfaces where possible, except in cases where outsloping would increase sediment delivery to streams or where outsloping is infeasible or unsafe;
- Routing road drainage away from potentially unstable stream channels, fills and hill slopes;

Roads would be designed and maintained in a manner that provides for water quality protection by controlling placement of fill material, keeping drainage facilities open, installing and maintaining appropriately-sized culverts at stream crossings, and by repairing ruts and failures to reduce erosion and sedimentation of aquatic habitats.

# RECREATION MANAGEMENT

**Goal 1 –** Provide a diverse array of recreational opportunities while maintaining healthy public land resources.

**Goal 2** – Establish, manage, and maintain quality recreation sites and facilities to meet a broad range of public needs subject to resource constraints.

**Goal 3** – Manage commercial, competitive, or special events with special recreation permits that eliminate or minimize impacts on resources and conflicts with other users.

**Goal 4** – Manage recreation opportunities to provide a sustained flow of local economic benefits and protect non-market economic values.

## Management Common to All Alternatives

"Leave No Trace" and "Tread Lightly" practices would be promoted to enhance the sustainability of resource-based activities.

BLM would support events that emphasize collaborative outreach and public awareness such as National Public Lands Day, National Fishing Week, Great Outdoors, National Trails Day, and others to promote public stewardship.

BLM would support and utilize volunteer participation and recruit and train volunteers to provide effective visitor contact assistance.

BLM would continue to provide a diverse range of quality recreation opportunities and experiences within the BFO commensurate with public demands, resource considerations, and management capabilities.

The BFO would follow BLM program direction for managing recreation on public lands by incorporating

"The BLM's Priorities for Recreation and Visitor Services", applicable sections of Appendix C of the Land Use Planning Handbook (USDI-BLM 2005a), and other BLM directives that are related to recreation management.

Comparable, cost effective and value based fee systems would be established for services and facilities provided to public users in accordance with the Butte Field Office Recreation Fee Area (MT-02) Business Plan, BLM directives and the Federal Lands Recreation Enhancement Act. BLM would strive to update the above Business Plan every five years to ensure site fees are appropriate over time using fair market values and cost recovery assessments.

There are no known significant caves or karsts in the Decision Area. Should these resources be discovered, BLM would develop management plans that address management, marketing, monitoring and administrative needs appropriate for the specific resource in accordance with Bureau directives.

Recreation users would be limited to 14-day camping stays with the following exceptions:

- The 7-day camping limit at Holter Lake Sites (Holter Dam, Holter Lake, Log Gulch, and Departure Point) would continue during the high-use fee season (Memorial Day to Labor Day) weekends.
- The 7-day rule would be implemented, as needed, at other sites if camping demands frequently exceed capacities during the high-use fee season (Memorial Day to Labor Day) weekends.
- Comply with Bureau directives governing dispersed camping in undeveloped areas throughout the Field Office.

Personal property of recreational users could not be unattended for more than 24 hours at recreation sites or for more than 72 hours on other BLM lands.

BLM would establish and maintain information kiosks with site maps, brochures, interpretive and educational information, important contacts, and site regulations at recreation sites.

BLM would maintain and develop a web-site of BLM recreation sites and areas that provides access information and available opportunities.

BLM would conduct periodic visitor satisfaction surveys and distribute annual fee collection and accomplishment reports to the public and encourage continual feedback from visitors.

BLM would strive to enhance voluntary compliance among recreation users through effective public education outreach efforts.

BLM would continue to conduct periodic accessibility, safety, and condition assessments in accordance with Bureau policy at developed recreation sites. Prioritize available funds to resolve deferred and corrective maintenance needs.

BLM would conduct annual evaluations of all fee sites that address project needs, support equipment, visitor services, public comments, administrative needs, fees, site regulations, and conflict concerns.

Continue to establish partnership agreements that are mutually beneficial to BLM and the public and maintain them to enhance comprehensive planning, collaborative management, and collective funding.

- The highly successful partnership with Pennsylvania Power and Light – Montana (PPLM) would be continued during the life of the project license within the Missouri River corridor and agreements made under the Missouri/Madison Comprehensive Recreation Plan would be fulfilled.
- Challenge Cost Share opportunities and grants to offset funding shortages would be sought and utilized.
- Working relationships with tourism organizations, recreation interest groups, and local/state/other federal governments would be maintained and expanded to enhance visitor services, management efficiencies, and recreation opportunities.
- BLM would strive to maintain the existing agreement with FWP that establishes partnership efforts and responsibilities to collectively manage the Black and White Sandy sites on Hauser Lake.
- BLM would pursue opportunities to expand day-use parking capacities on Holter Lake in cooperation with the Missouri/Madison Comprehensive Recreation Plan.

BLM would continue to issue special recreation use permits as appropriate for non-motorized commercial, competitive, and special events subject to 2930 Handbook guidance, resource capabilities, social conflict concerns, professional qualifications, public safety, and public needs. New permits that directly conflict with established special recreation use permits would not be authorized. Existing permittees would be given preference. (Organized motorized events are addressed in the Travel Management section.)

BLM would continue to prioritize funding and management efforts at developed recreation sites that receive the heaviest visitation rates. Sites that cannot be managed to acceptable health and safety standards would be closed until deficiencies are corrected.

## Alternative A

No fees would be charged for commercial fishing and floating outfitters using developed BLM river access sites.

Variances (extensions) to the 14-day camping limit would be considered on a case-by-case basis subject to the following considerations: resource impacts, social conflicts, sanitation concerns, no livestock, or commercial activities would be involved.

BLM would continue to allow recreational activities including motorized vehicle uses within the Scratchgravel Hills 24 hours/day.

Authorization of commercial camping activity would be considered throughout the Field Office on a case-by-case basis subject to resource constraints, management capabilities, social conflicts, and public health and safety concerns.

Permit requests by outfitter and guide hunters would be considered on a case-by-case basis throughout the Field Office subject to environmental, social, and public health and safety concerns.

Boat-in camping would continue to be allowed on BLM shoreline lands on Hauser and Holter Lakes subject to current regulations only.

## Management Common to Action Alternatives (B, C, and D)

BLM would establish designated boat-in camp sites along the shoreline of Holter Lake and consider a similar designation effort for the Hauser Lake shoreline, should resource concerns warrant.

In accordance with policy guidance (IM No. 2004-150), a greater priority would be placed on extending appropriate, reoccurring permits from five years to 10 years.

BLM would coordinate with MFWP to manage appropriate uses at BLM launch sites as necessary to ensure quality recreation opportunities and experiences on State waters and affected BLM lands are collectively managed.

New sites would be developed commensurate with public demand, resource constraints, and management capabilities. Priority would be given to new sites that have partnership funding strategies and are consistent with established ROS and SRMA management guidelines.

If an existing developed recreation site significantly contributes to Land Health Standards not being met, the impacts from the site would be minimized to the extent possible.

All new recreation sites would be designed, constructed, and managed to meet, or move toward meeting, Land Health Standards.

## Alternative B – Preferred Alternative

Day-use Special Recreation Permits would be issued for commercial fishing and floating uses at BLM river access sites. Outfitters would be annually billed an advance flat fee (currently $90.00) established by the Director based on the Implicit Price Deflator Index. In the long-term, the BLM would continue to coordinate with MFWP to enhance river/corridor land management and to possibly develop a multi-agency statewide fee system for the commercial uses of river access sites.

Variances to the 14-day camping limit during the hunting season would be considered on a case-by-case basis subject to the following considerations: resource impacts, social conflicts, sanitation concerns, no livestock, or commercial activities would be involved. Preference will be given to developed recreation sites during this low use period since they provide hardened camping units, toilet facilities, and good access.

The interior portions of the Scratchgravel Hills area would be closed to motorized vehicle use yearlong except on limited routes needed for residential access. Signs and gates would be installed at appropriate access points to notify users of the closures.

Commercial camping permits within developed fee sites would not be allowed during the fee season (Memorial Day to Labor Day).

In order to reduce user conflicts and resource impacts, special recreation use permits during the hunting season would be limited to day-use activities with the exception that camping uses would be considered within developed recreation sites with hardened camping units during the non-fee season.

Boat-in camping at dispersed sites (excluding Beartooth Landing) on BLM lands along the east shoreline of Holter Lake would be limited to designated sites only. Site availability would be determined through field evaluations by an interdisciplinary team. Suitable sites where impacts to other important resources (wildlife, cultural resources, riparian, vegetation, etc.) are acceptable would be designated, signed, and available to the public on a first-come, first-served basis. A similar management system would be undertaken for BLM lands on Hauser Lake should conditions warrant.

Under Alternative B, human food storage regulations would be developed and implemented for all recreation sites with high potential and/or known encounters between people and bears.

## Alternative C

Day-use Special Recreation Permits would be issued for each commercial fishing and floating outfitter that uses developed BLM river access sites. Outfitters would be billed in advance at a rate of $90.00 per year. Final bills would be assessed based on actual use reports and established BLM policies. An estimated additional 200 to 300 permits per year would need to be processed.

No variances to 14-day camping limits would be allowed.

Commercial camping permits within developed fee sites would not be allowed during the fee season (Memorial Day to Labor Day).

Special recreation use permits during the hunting season would be limited to day-use activities only.

The entire BLM shoreline along Hauser and Holter Lakes excluding developed sites would be closed to camping.

Like in Alternative B, human food storage regulations would be developed and implemented for all recreation sites with high potential and/or known encounters between people and bears.

### Alternative D

BLM would postpone fees for commercial fishing and floating outfitters using developed BLM river and lake sites accessing state waterways until a multi-agency statewide fee system is established. Under this system BLM would receive a portion of collections based on a percentage of total sites under the statewide system. This system would be customer friendly and would ensure interagency coordination for managing uses on state waterways.

Like Alternative B, variances to the 14-day camping limit would be considered on a case-by-case basis subject to the following considerations: resource impacts, social conflicts, sanitation concerns, no livestock, or commercial activities would be involved. Preference will be given to developed recreation sites during this low use period since they provide hardened camping units, toilet facilities, and good access.

Motorized and non-motorized recreational uses would be allowed 24 hours/day in the Scratchgravel Hills area in accordance with the travel management plan.

Authorization of commercial camping activity would be considered throughout the Field Office on a case-by-case basis subject to resource constraints, management capabilities, social conflicts, and public health and safety concerns.

Permit requests by outfitter and guide hunters would be considered on a case-by-case basis throughout the Field Office subject to environmental, social, and public health safety concerns.

Boat-in camping along the BLM shoreline on Hauser and Holter Lakes would continue under current regulations.

## RECREATION SITES

### Management Common to All Alternatives

Recreation sites and facilities would be maintained and managed to promote resource value protection, public safety and health, quality facilities, visitor experiences, management efficiency, and value based returns. These sites are listed by recreation management areas in Chapter 3. The location of these sites is displayed on **AMS Figures 2-24a, 2-24b,** and **2-24c**.

## RECREATION OPPORTUNITY SPECTRUM

### Alternative A – No Action

There would be no ROS classifications to identify and map essential landscape settings to meet public preferences and manage recreation-related experience expectations. Recreation opportunities would be evaluated on a case-by-case basis as part of project planning.

### Management Common to Action Alternatives (B, C, and D)

Under the action alternatives, an objective would be to manage ROS classes for desired recreation opportunities, experience levels, facility developments, and other resource uses. **Appendix H – Recreation Opportunity Spectrum** contains a description of ROS categories.

### Alternative B – Preferred Alternative

Recreation settings and opportunities would be managed in accordance with the classifications in **Table 2-14** and **Map 26**. This alternative emphasizes slightly more motorized recreation than Alternative C but less than Alternative D.

**Table 2-14**
**Alternative B Proposed ROS**

| ROS Class | Acres[1] |
|---|---|
| Semi-Primitive Non-Motorized | 36,800 |
| Semi-Primitive Motorized | 71,800 |
| Roaded Natural | 171,100 |
| Roaded Modified | 16,600 |
| Rural | 11,000 |

[1] Acres are approximate and rounded to nearest 100.

### Alternative C

Recreation settings and opportunities would be managed in accordance with the classifications in **Table 2-15** and **Map 27**. This alternative provides for the greatest amount of non-motorized recreation, and less motorized recreation than any of the action alternatives.

**Table 2-15**
**Alternative C Proposed ROS**

| ROS Class | Acres[1] |
|---|---|
| Semi-Primitive Non-Motorized | 63,700 |
| Semi-Primitive Motorized | 66,900 |
| Roaded Natural | 158,100 |
| Roaded Modified | 15,900 |
| Rural | 2,700 |

[1] Acres are approximate and rounded to nearest 100.

## Alternative D

Recreation settings and opportunities would be managed in accordance with the classifications in **Table 2-16** and **Map 28**. This alternative provides for the greatest amount of motorized recreation, and the least amount of non-motorized recreation than any of the alternatives.

**Table 2-16**
**Alternative D Proposed ROS**

| ROS Classes | Acres[1] |
|---|---|
| Semi-Primitive Non-Motorized | 30,000 |
| Semi-Primitive Motorized | 37,600 |
| Roaded Natural | 186,100 |
| Roaded Modified | 19,600 |
| Rural | 34,000 |

[1] Acres are approximate and rounded to the nearest 100.

# SPECIAL RECREATION MANAGEMENT AREAS (SRMAS)

## Management Common to All Alternatives

The management objective for Special Recreation Management Areas would be to meet the needs for their primary recreation tourism markets, needed recreation management zones, Recreation Opportunity Spectrum, and primary recreation opportunities. Special Recreation Management Areas would be designated under all alternatives to guide recreation management priorities. The remaining BLM lands not designated as SRMAs would be managed as an Extensive RMA. This area would be managed on a lower priority basis with a few exceptions at some specific sites/locations due to use concentrations, resource concerns, and/or public demand.

## Alternative A – No Action

Planning efforts, recreation opportunities and management would continue to be prioritized at the five Special Recreation Management Areas (Holter Lake/Sleeping Giant, Lewis & Clark National Trail, Upper Big Hole River, Humbug Spires, and Scratchgravel Hills) displayed on **Map 29**. The remainder of the field office, identified as the Headwaters Extensive Recreation Management Area, would be managed on a custodial or lower priority basis with a few exceptions at some specific sites.

## Management Common to Action Alternatives (B, C, and D)

Implementation plans for Special Recreation Management Areas (SRMAs) and delineated Recreation Management Zones would be developed where specific management, marketing, monitoring and administrative guidance is needed.

Although designation of SRMAs varies under the action alternatives by alternative, if designated, **Table 2-17** indicates the primary recreational management strategy (primary recreation tourism market, needed recreation management zones, ROS, and primary recreation opportunities) for each of the potential SRMAs.

## Alternative B – Preferred Alternative

Nine SRMAs would be designated for priority management. This alternative would establish two new areas (Pipestone and Sheep Mountain); split the Holter Lake/Sleeping Giant SRMA into two separate areas (Sleeping Giant/Missouri River and Lower Holter Lake/Missouri River given their distinctly separate Recreation Tourism Markets (RTMs)); and replace the Lewis & Clark Trail with two priority areas (Hauser Lake and Uppermost Missouri River).

These nine SRMAs are depicted on **Map 30**. These areas are:

- Lower Holter Lake/Missouri River,
- Sleeping Giant/Missouri River,
- Hauser Lake,
- Uppermost Missouri River,
- Scratchgravel Hills,
- Sheep Mountain,
- Pipestone,
- Upper Big Hole River, and
- Humbug Spires.

Two new areas, Pipestone and Sheep Mountain, would be designated as SRMAs. Planning guidance would include area specific travel management plans, recreation site plans, ROS and VRM classifications and other directives.

## Alternative C

The same nine SRMAs designated in Alternative B would also be designated in Alternative C. These SRMAs are depicted on **Map 30**.

## Alternative D

Five SRMAs would be designated for priority management. Management would focus on the most developed and heavily used BLM areas. These five SRMAs are depicted on **Map 31**. The areas are:

- Lower Holter Lake/Missouri River,
- Hauser Lake,
- Uppermost Missouri River,
- Pipestone, and
- Upper Big Hole River.

**Table 2-17**
**Management of Special Recreation Management Areas**

| SRMA | Recreation Tourism Market | Recreation Management Zones | ROS | Primary Recreation Opportunities |
|---|---|---|---|---|
| Lower Holter Lake/Missouri River | Community | One | Rural | Developed camping and day-use activities, lake access for motorized boating, fishing, swimming, picnicking, and group gatherings. |
| Sleeping Giant/ Missouri River | Undeveloped | Two subunits: Sleeping Giant ACEC/Preliminarily WSR reach of Missouri R. above Holter Lake and non-ACEC portion of Sleeping Giant | ACEC/Eligible W&SR Lands; Semi-Primitive, Non-motorized<br>Non-ACEC; Semi-primitive, Motorized | ACEC Eligible W&SR Lands; Primitive shoreline camping, fishing, hiking, hunting, horseback riding and natural viewing.<br>Non-ACEC; Limited motorized travel, pleasure driving, hunting, horseback riding and natural viewing. |
| Lewis & Clark National Trail | Community | One | Primarily Roaded Natural | Developed camping and day-use activities, lake access for boating/floating, fishing, swimming, picnicking, and group gatherings. |
| Scratchgravel Hills | Community | One | Rural | Hiking, mountain biking, horseback riding, hunting, and driving for pleasure. |
| Pipestone | Community | One | Roaded Natural | OHV riding, driving for pleasure, semi-developed camping, hunting, horseback riding, hiking and mountain biking. |
| Upper Big Hole River | Destination | One | Primarily Roaded Natural | Semi-developed camping, limited motorized pleasure driving, river access for floating and fishing, fall hunting, hiking and natural viewing. |
| Humbug Spires | Undeveloped | One | Semi-primitive, Non-motorized | Hiking, backpacking, rock climbing, primitive camping, fishing, and hunting. |
| Hauser Lake | Community | One | Hauser Lake: primarily Roaded Natural | Hauser Lake: Developed camping, lake access for boating, fishing, swimming, picnicking, and group gatherings. |
| Uppermost Missouri River | Community | One | Primarily Rural | Semi-Developed camping, lake access for motorized and non-motorized boating, fishing, picnicking and upland hunting. |
| Sheep Mountain | Community | Two sub-units separated by Sheep Mountain Access road | Northern sub-unit; Semi-primitive, Non-motorized<br>Southern sub-unit; Roaded Natural | Northern sub-unit; Hiking, rock climbing, hunting and natural viewing.<br>Southern sub-unit; OHV riding, driving for pleasure, semi-developed camping, and hunting. |

# SPECIAL DESIGNATIONS

**INCLUDING AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACECS), NATIONAL TRAILS, WILD AND SCENIC RIVERS AND WILDERNESS STUDY AREAS (WSAS)**

# ACECs

**Goal** – Designate ACECs where special management attention is required to protect important and relevant values.

## Management Common to All Alternatives

The Sleeping Giant ACEC would continue to be managed as an ACEC. While this ACEC was identified as being 11,609 acres when it was originally designated, more accurate GIS calculations based on its original boundaries indicate a size of 11,679 acres.

## Alternative A – No Action

No new ACECs would be established. The pre-existing Sleeping Giant ACEC (11,679 acres) would continue to be managed under the original management plan.

## Management Common to Action Alternatives (B, C, and D)

Information on the relevant and important values evaluations of the five potential ACECs reviewed in this planning process is summarized in **Table 2-18,** Chapter 3, and **Appendix I – ACECs**. The general location of the five Potential ACECs is shown on **Map 32**. Boundaries of Sleeping Giant, Humbug Spires, Spokane Creek, and Ringing Rocks potential ACECs would be the same (as shown on **Map 32**) in all alternatives in which they are individually proposed. **Map 32** displays proposed ACEC designations under Alternative C in which all potential ACECs would be proposed. Boundaries of the Elkhorns potential ACEC vary by alternative as described and shown below.

In discussions of each individual ACEC below, general management direction is characterized by major management activity category. Special management prescriptions are designated as such:

- *special management prescriptions*

Relevant and important values in areas not proposed for ACEC designation under a given RMP alternative would be managed in accordance with the direction specified for each resource or program under that particular alternative.

In the event that WSAs designated as ACECs become designated as wilderness, ACEC management would be dropped upon development of wilderness management plans.

### *Sleeping Giant ACEC*

Sleeping Giant ACEC (11,679 acres) would be managed as an ACEC under all action alternatives under its original management plan with the following modifications. Management direction is characterized by major management category in the existing plan.

- *Area would be closed to all new rights-of-way. Maintenance of the existing Towhead/Falls Gulch Power line would be allowed. Future upgrades would be authorized provided impacts to the ACEC resources are not degraded.*
- *Discretionary management actions would only be allowed to protect or enhance ecosystems, and long-term ACEC values (naturalness, primitive and unconfined forms of recreation, solitude experiences, visual resources, native wildlife, and cultural resources).*

**Table 2-18**
**Potential ACECs**

| ACEC | Relevant and Important Values |
|---|---|
| Sleeping Giant | • Outstanding scenic qualities.<br>• Diverse upland and aquatic habitat for wildlife and fish. |
| Elkhorn Mountains | • Important cultural/historic sites.<br>• Diverse upland and aquatic habitat for wildlife and fish.<br>• Unique National management area. |
| Spokane Creek | • Natural aquatic and riparian habitat.<br>• Critical fish spawning stream for Hauser Lake. |
| Ringing Rocks | • Rare and unique geological rock feature. |
| Humbug Spires | • Outstanding scenic qualities.<br>• Unique geological features.<br>• Diverse upland and aquatic habitat for plants, animals, and fish. |

- ❖ *For the entire river/lake shoreline, the existing livestock grazing restrictions outlined in the current grazing lease and Oxbow Allotment Management Plan would continue to be implemented. BLM would cooperatively work with the lessee to restrict and/or manage livestock grazing along the river/lake shoreline from Memorial Day weekend through Labor Day weekend to enhance primitive recreation experiences, soil/water quality conditions, visual resources, and natural values.*
- BLM would seek opportunities to allow for prescribed natural fires and develop a coordinated management plan if appropriate.
- In addition to controlling noxious weeds through chemical and biological means, mechanical (hand pulling) efforts would also be utilized where practical.
- ROS management for the ACEC would be semi-primitive non-motorized.
- With the exception of the Beartooth Landing Site, docks would not be authorized at the primitive shoreline sites.
- ❖ *Cutting of dead and down material for firewood would not be allowed unless specifically authorized.*
- ❖ *Aerial spraying along the streams and river (300 feet from water) would be prohibited.*

### *Humbug Spires Potential ACEC*

The Humbug Spires potential ACEC (8,374 acres) would be managed as an ACEC under all action alternatives under the following management guidance. Management direction is characterized by critical resource and resource use categories below.

#### Recreation Opportunity Spectrum

- ACEC would be managed for Semi-Primitive Non-motorized experiences.

#### Motorized Travel Management

- Area would be closed yearlong to all motorized travel in order to protect natural and scenic values.
- ❖ *No new roads or motorized trails would be authorized.*
- Motorized route closures would be managed within the area in accordance with the Upper Big Hole River Travel Plan.

#### Visual Resource Management

- ACEC would be managed for VRM Class II objectives.

#### Land Ownership/Adjustment

- All BLM lands would be retained in the ACEC.
- ❖ *High priority would be given to acquiring inholding lands or interests and adjacent lands along Moose Creek on east boundary from willing landowners to enhance management and ACEC values.*
- ❖ *Area would be classified as not suitable for Recreation and Public Purposes patent actions.*

#### Land Use Authorizations

- ❖ *Area would be closed to all new rights-of-way and 2920 Permits and Leases.*
- ❖ *Area would be classified as not suitable for Recreation and Public Purposes lease actions.*

#### Leasable Minerals (Oil and Gas)

- ❖ *Oil and Gas activities would be subject to No Surface Occupancy (would apply if the Humbug Spires WSA were released from wilderness consideration).*
- ❖ *Area would be unavailable to all other mineral leases.*

#### Locatable Minerals

- ACEC values would be protected from undue and unnecessary degradation.
- A Plan of Operations would be required for any surface disturbing activity greater than casual use in the ACEC.

#### Salable Minerals

- The area would be unavailable to salable minerals.

#### Vegetation Management

- ❖ *Management activities would be allowed to restore ecosystems provided natural, primitive recreation, native wildlife and scenic values are protected.*

#### Fire

- BLM would seek opportunities with surrounding landowners (private/FS) to allow natural fires to burn when they are within established prescriptions and beneficial to ACEC values.
- Prescribed fires would only be used in situations that would benefit ACEC values.

#### Livestock Grazing

- ❖ *Management would ensure against unauthorized livestock grazing (maintain/build boundary fences, cattle guards and closely monitor livestock trailing).*
- Management activities would only be allowed to protect or enhance ecosystems and ACEC values.

#### Additional Special Management

- ❖ *BLM would assess alternatives and implement measures to minimize visitor encounters and enhance solitude experiences along the established hiking trail.*

- *The existing trail would be rerouted/maintained to address erosion and water quality concerns.*
- *Outfitter camping use within 200 feet of existing trail would be eliminated.*
- *Special permit uses would be eliminated during summer holiday weekends if conflicts arise with other public visitors.*
- *BLM would close rock climbing on spires with active raptor nests to outfitter uses and educate the public about the importance of avoiding such locations.*
- *The interpretative information displayed at the Moose Creek Trailhead would be improved to:*
  - *Describe the area and its important/relevant characteristics.*
  - *Educate visitors about resource protection and Leave No Trace principles.*
  - *Display a quality map of the area.*

### *Elkhorns Potential ACEC*

The Elkhorns potential ACEC would be managed as an ACEC in all action alternatives. The size of this potential ACEC would vary by alternative as described for each alternative below. Management direction is characterized by major management activity categories by alternative.

## Alternative B – Preferred Alternative

Four potential ACECs would be designated totaling 70,644 acres. These areas are Sleeping Giant (11,679 acres), Elkhorns (50,431 acres), Humbug Spires (8,374 acres), and Ringing Rocks (160 acres). The Elkhorns ACEC would include priority wildlife and primitive recreation lands as a subset of the area described in the interagency MOU as the Elkhorn Mountains Cooperative Wildlife Management Unit boundary (**Map 33**). Therefore the Elkhorns ACEC boundary in Alternative B does not match the area described as the cooperative management unit in the interagency MOU.

Proposed management of Sleeping Giant and Humbug Spires is described in "Management Common to Action Alternatives" above.

### *Ringing Rocks Potential ACEC (160 acres)*

The Ringing Rocks withdrawal was established in 1965. The Montana Bureau of Mining and Geology evaluation concluded that while the greater surrounding area has high mineral potential, the Ringing Rocks withdrawal area has low to no mineral potential.

The Ringing Rocks is a geologic feature resulting from a combination of chemical composition and jointing patterns which chime when struck. Rocks removed from the formation do not ring. The only other ringing rocks formation known in the United States is located in Pennsylvania.

If the Ringing Rocks feature was changed in any way, including mining, it could not be reclaimed to the extent that the rocks would once again ring.

#### Salable Minerals

- *The area would be unavailable to salable minerals.*

#### Vegetation Management

- *Vegetation treatments would be planned to ensure that the visual qualities of the 160-acre area are not adversely impacted.*

#### Additional Special Management

BLM would manage the area as follows.

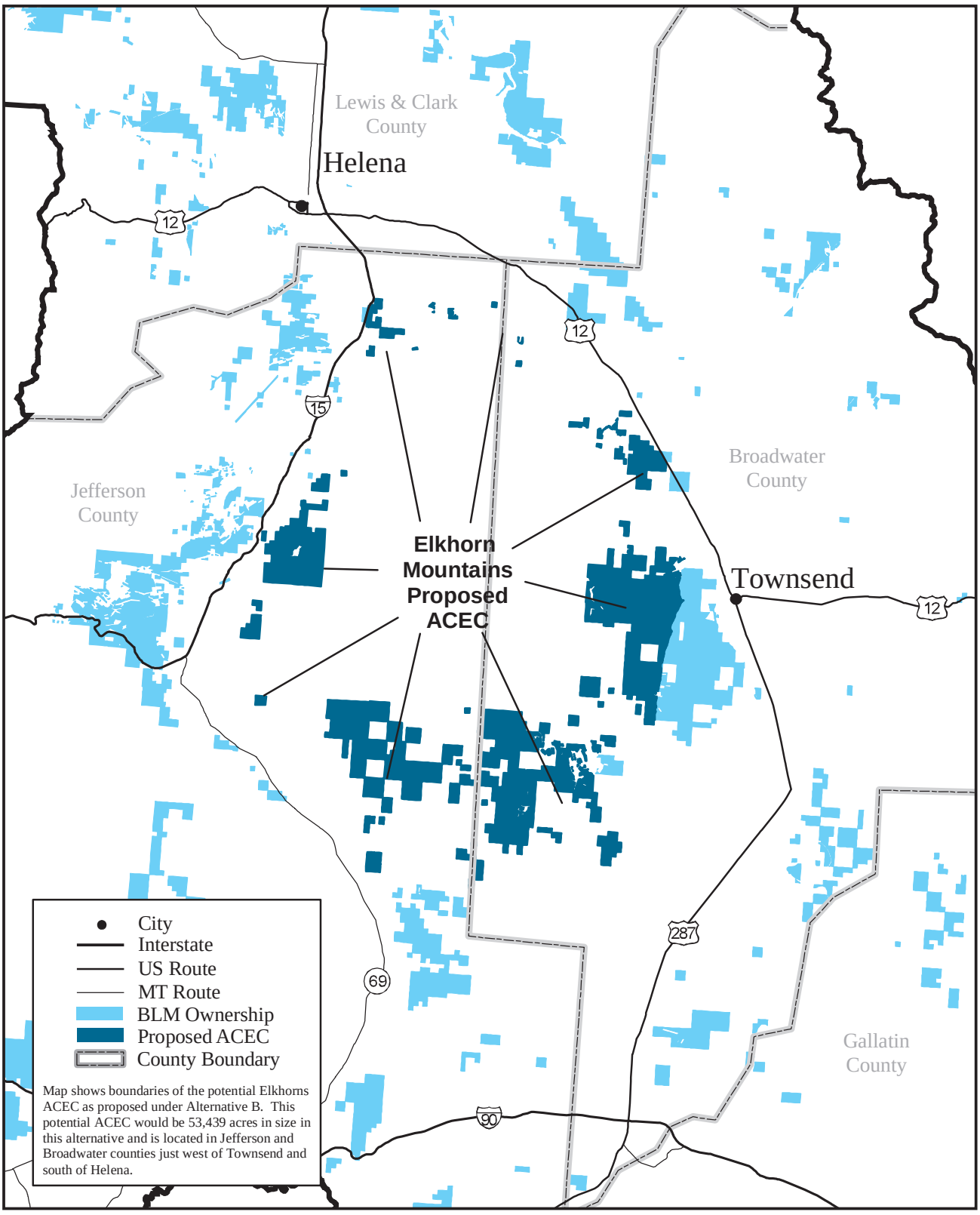
- *Improve interpretative information displayed at the site to:*
  - *Discuss the uniqueness of the rock formation.*
  - *Educate visitors about the importance of protecting the rock features*
  - *Describe the cultural / mining history of the area*
- *Collection/removal of rocks within the formation would not be allowed.*
- *Reclaim the nearby abandoned mine shaft.*
- *Protect any cultural features at risk.*

### *Elkhorns Potential ACEC (50,431 acres)*

The Elkhorns potential ACEC boundary was developed based on modifications to the geographic area described for management of the Elkhorns Cooperative Wildlife Management Unit in the interagency MOU. Modifications to that boundary are proposed in this alternative to focus most on areas important to wildlife and non-motorized recreation (**Map 33**). Management direction for the Elkhorns ACEC by major management categories is described below.

#### Recreation Opportunity Spectrum

- Majority of the area would be managed as Roaded Natural.
- Elkhorns Tack-on WSA would be managed as Semi-Primitive Non-motorized.
- Wood-Horse Gulch area North of BPA road would be managed as Semi-Primitive Motorized.
- Nursery-Golconda Creek area northwest of WSA would be managed as Semi-Primitive Motorized.
- Parcels between Dutchman and Prickly Pear Creek would be managed as Semi-Primitive Motorized.

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**Map 33: Elkhorn Mountains Proposed Areas of Critical Environmental Concern (ACEC) Under Alternative B**

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- Johnny-Keating area would be managed as Roaded Modified.

### Motorized Travel Management

- Motorized travel would be "limited" to designated routes in order to protect wildlife and non-motorized recreation values.
- No new permanent roads or motorized trails would be authorized for public use (road relocation would be allowed to protect resources, maintain access and/or protect human safety).
- Existing road closures would be maintained and enforced per the 1995 Elkhorns travel plan. BLM would re-evaluate and/or monitor routes to determine if changes to existing plan are required.

❖ *Non-motorized recreation would be promoted and emphasized.*

### Visual Resource Management

- The majority of the area would be managed as VRM Class III and IV.
- The Elkhorns Tack-on WSA would be managed as VRM Class II.
- High visibility lands along Missouri River, canyon cliffs along Indian Creek and scattered parcels adjacent to FS north and west boundaries would be managed as VRM Class II.

### Land Ownership/Adjustment

❖ *All BLM lands within the ACEC would be retained in BLM public ownership.*

❖ *Areas would be classified as not suitable for Recreation and Public Purposes patent actions.*

❖ *Priority would be given to acquire lands (fee title/easements) to "block up" BLM lands within and adjacent to the ACEC to enhance relevant and important values, manageability and public access to or within the area.*

### Land Use Authorizations

❖ *The ACEC would be open to new rights-of-way and 2920 Permits and Leases with restrictions to protect area values.*

❖ *Area would be classified as not suitable for Recreation and Public Purposes lease actions.*

### Leasable Minerals (including Oil and Gas)

- No Surface Occupancy would be allowed in Muskrat Creek Watershed.
- No Surface Occupancy would be allowed in Crow Creek Campground.
- No Surface Occupancy would be allowed in sensitive plant population locations.
- Remaining area would be subject to stipulations for oil and gas exploration for Alternative B.

### Locatable Minerals

ACEC lands would be open to operations under the Mining Laws. An approved Plan of Operations would be required for surface disturbing activity greater than casual use.

### Salable Minerals

- Salable minerals sales would be allowed in a way that minimizes impacts to wildlife and recreation.

### Vegetation Management

❖ *The Elkhorns would be managed as an ecological unit across political boundaries for the purpose of sustaining ecological systems, including the full range of potential biological diversity and ecosystem processes.*

❖ *No timber salvage would be allowed unless beneficial to ACEC values or needed for human safety.*

### Wildlife

❖ *Current direction outlined in the Memorandum of Understanding (MOU) signed by MFWP, USFS, and BLM would be followed within a modified boundary from the one described in the MOU.*

- Wildlife and wildlife habitats would be managed to support populations of species associated with endemic vegetative communities, with emphasis on providing the necessary habitat components for those species with special needs.
- Management activities would have long-term benefits to wildlife and would minimize short-term impacts (with the exception of mining).
- The BLM would seek opportunities to convert sheep allotments to cattle allotments at the time an allotment is vacated, sold, or transferred. Existing sheep allotments would remain in effect unless the permittee is interested in working with the BLM to convert to cattle.
- BLM would continue to actively participate in partnerships.

❖ *BLM would continue to work with MFWP and the USFS to resolve issues in the Elkhorn Mountain Range.*

- Activity timing restrictions for burning, noise and ground disturbance would be enforced.

### Fire

- BLM would seek opportunities with surrounding landowners (private/FS) to allow natural fires to burn when within established prescriptions.

- BLM would continue following the existing Elkhorns Fire Management Plan but evaluate all opportunities for natural fire use.

### Livestock Grazing

- BLM would provide priority management to ensure against unauthorized livestock grazing (maintain/build boundary fences, cattle guards and closely monitor livestock trailing).
- Management activities would be allowed only to maintain or enhance ecosystems, natural qualities, and scenic values.

### Cultural

- BLM would refrain from developing any additional roads to prevent further degradation to historic ditches, dams, and reservoirs.

## Alternative C

All five potential ACECs would be designated totaling 87,893 acres. These areas are Sleeping Giant (11,679 acres), Elkhorns (67,665 acres), Humbug Spires (8,374 acres), Spokane Creek (14 acres), and Ringing Rocks (160 acres). The Elkhorns ACEC would be enlarged to include all BLM lands within the interagency MOU boundary (**Map 34**).

Management direction for Sleeping Giant and Humbug Spires would be the same as that described in "Management Common to Action Alternatives" above. Management direction for Spokane Creek and Ringing Rocks would be the same as that described for Alternative B.

### *Elkhorns Potential ACEC (67,665 acres)*

The proposed boundary for this ACEC in this alternative incorporates the geographic boundary described in the interagency Elkhorns Wildlife Management Unit MOU. Management direction for the Elkhorns ACEC would be the same as that described for Alternative B with the following variations.

### Motorized Travel Management

- Motorized travel would be "Limited" to designated routes in order to protect wildlife and non-motorized recreation values (except for play area near Radersburg).

❖ *Non-motorized recreation would be emphasized and promoted except in the Radersburg play area.*

### Wildlife

❖ *The current direction outlined in MOU signed by MFWP, the USFS and the BLM would be followed within the entire boundary around the Elkhorn Mountain Range as described in the MOU.*

### Cultural

- BLM would conduct thorough research on the Hassel Canyon flume with the intent of interpreting the structure at some point in the future.

### Locatable Minerals

❖ *Approximately 180 acres in riparian areas of the Muskrat and Nursery Creek drainages would be recommended for withdrawal from mineral entry.*

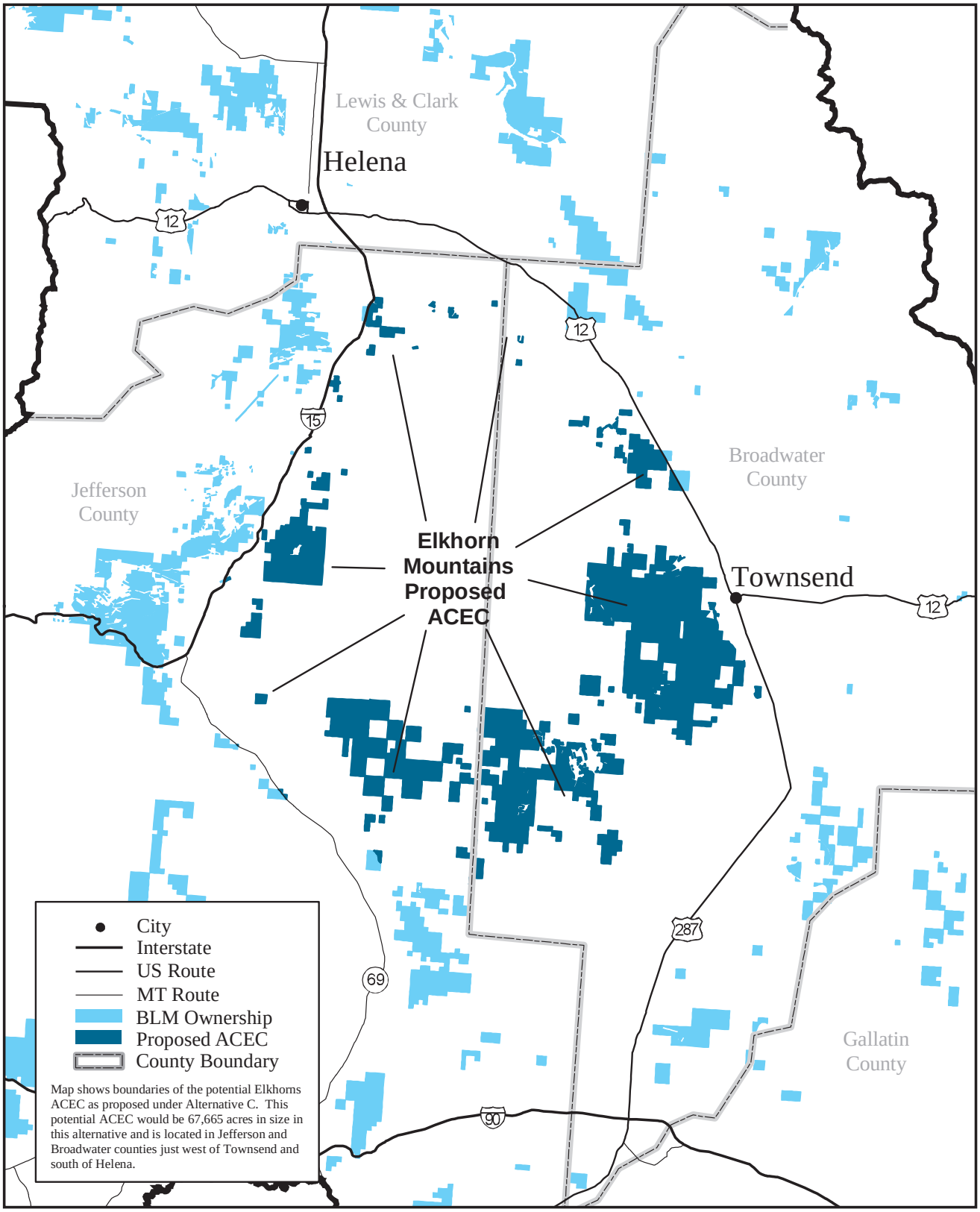
Westslope cutthroat trout have declined in abundance, distribution, and genetic diversity throughout their native range. In the Missouri River drainage of Montana genetically pure westslope cutthroat trout are estimated to persist in less than 5 percent of the habitat they once occupied. To prevent listing under the Endangered Species Act, federal and state managers need to ensure conservation of local populations, preservation of genetic diversity and work towards the long-term, self-sustaining persistence of westslope cutthroat trout (MFWP 1999).

Muskrat Creek has importance to westslope cutthroat trout restoration beyond the local level because after a ten year, $50,000 restoration effort, its population is now used as a donor source to re-establish westslope cutthroat trout in a number of different locations in the State of Montana. Montana Fish, Wildlife and Parks has identified Muskrat Creek as the most secure and having the strongest population of westslope cutthroat trout in the entire Elkhorn Mountain range.

The 180 acres proposed for the Muskrat/Nursery Creek withdrawal would provide the minimum amount of protection to water quality, stream morphology, and riparian function to protect the restored and unique population of westslope cutthroat trout.

This withdrawal would protect the genetically pure westslope cutthroat trout population in Muskrat Creek by preventing loss of riparian vegetation, streambed and bank destabilization, erosion and sedimentation, loss of floodplain vegetation, alteration of floodplain morphology, and alteration of stream channel morphology that could occur in association with locatable mineral activity, particularly placer mining. Another key impact that placer mining (including casual use) could have on westslope cutthroat trout, is excavation, crushing, or disturbance of streambed gravels during the critical period when trout are spawning and eggs are incubating/hatching. If mining operations cause a decline in the population, the population may no longer be able to function as a donor source for Montana and impede restoration efforts."

Muskrat and Nursery Creek are located in the southern Elkhorn WSA which was evaluated in the joint Bureau of Mines and USGS report Mineral Summary Bureau of Land Management Wilderness Study Areas in Montana (1990). In the Muskrat and Nursery Creek areas the report concluded that there is high resource potential for




Map Scale 1:1,500,000

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**Map 34: Elkhorn Mountains Proposed Areas of Critical Environmental Concern (ACEC) Under Alternative C**

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copper, molybdenum and tungsten with a certainty level of D (available information clearly defines the level of mineral resource potential, the highest level of confidence), as well as a moderate mineral resource potential for uranium and thorium with a certainty level of C (Available information gives a good indication of the level of resource potential, US DOI Bureau of Mines and USGS, 1990).

No potential for placer mining has been identified in either Muskrat or Nursery Creek; therefore there is a very low probability of any proposals being submitted to the BLM. In the absence of a mineral withdrawal, should a miner propose to conduct placer mining in these drainages, timing stipulations could be attached to the permit to protect critical periods of spawning and incubation/ hatching. Should lode mining be proposed for any of resources identified in the Bureau of Mines report mining practices, BMPs, reclamation/rehabilitation techniques, and bonding would be applied. If unavoidable impacts were to occur they would be mitigated through restoration at the conclusion of mining to the extent practicable. In spite of these measures, minerals operations that substantially reduce the size of the westslope cutthroat trout population and/or have long-term substantial adverse effects on aquatic habitat could eliminate the ability to use this fish population as a donor source to re-establish other populations.

The remaining ACEC lands would be open to operations under the Mining Laws. An approved Plan of Operations would be required for surface disturbing activity greater than casual use.

## Alternative D

Three potential ACECs would be designated in Alternative D totaling 23,628 acres. These areas are Sleeping Giant (11,679 acres), Elkhorns (3,575 acres), and Humbug Spires (8,374 acres). The Elkhorns ACEC boundary would be reduced to include only the WSA lands within the MOU boundary (**Map 35**).

Management direction for Sleeping Giant and Humbug Spires would be the same as that described above.

### *Elkhorns Potential ACEC (3,575 acres)*

In this alternative the Elkhorns potential ACEC would only include the 3,575 acre WSA boundary. Proposed management for this area by major management category is described below.

#### Recreation Opportunity Spectrum

- The area would be managed as Semi-Primitive Non-motorized.

Motorized Travel Management

- Motorized travel would be "limited" to designated routes in order to protect wildlife and non-motorized recreation values.
- No new permanent roads or motorized trails would be authorized for public use (road relocation would be allowed to protect resources, maintain access and/or protect human safety).
- Existing road closures would be maintained and enforced in accordance with the 1995 Elkhorns travel plan. BLM would re-evaluate and/or monitor routes to determine if changes to existing plan are required.
- Non-motorized recreation would be emphasized and promoted within the ACEC.

#### Visual Resource Management

- The area would be managed as VRM Class II.

#### Land Ownership/Adjustment

- *All BLM lands within the ACEC would be retained in BLM public ownership.*
- *Area would be classified as not suitable for Recreation and Public Purposes actions.*
- *Priority would be given to acquire lands (fee title/easements) to "block up" BLM lands within and adjacent to the ACEC to enhance relevant and important values, manageability and public access to or within the area.*

#### Land Use Authorizations

- The ACEC would be open to new rights-of-way and 2920 Permits and Leases with restrictions to protect area values.

#### Leasable Minerals (including Oil and Gas)

- No Surface Occupancy would be allowed in Muskrat Creek Watershed.

#### Locatable Minerals

- ACEC lands would be open to operations under the Mining Laws. An approved Plan of Operations would be required for surface disturbing activity greater than casual use.

#### Salable Minerals

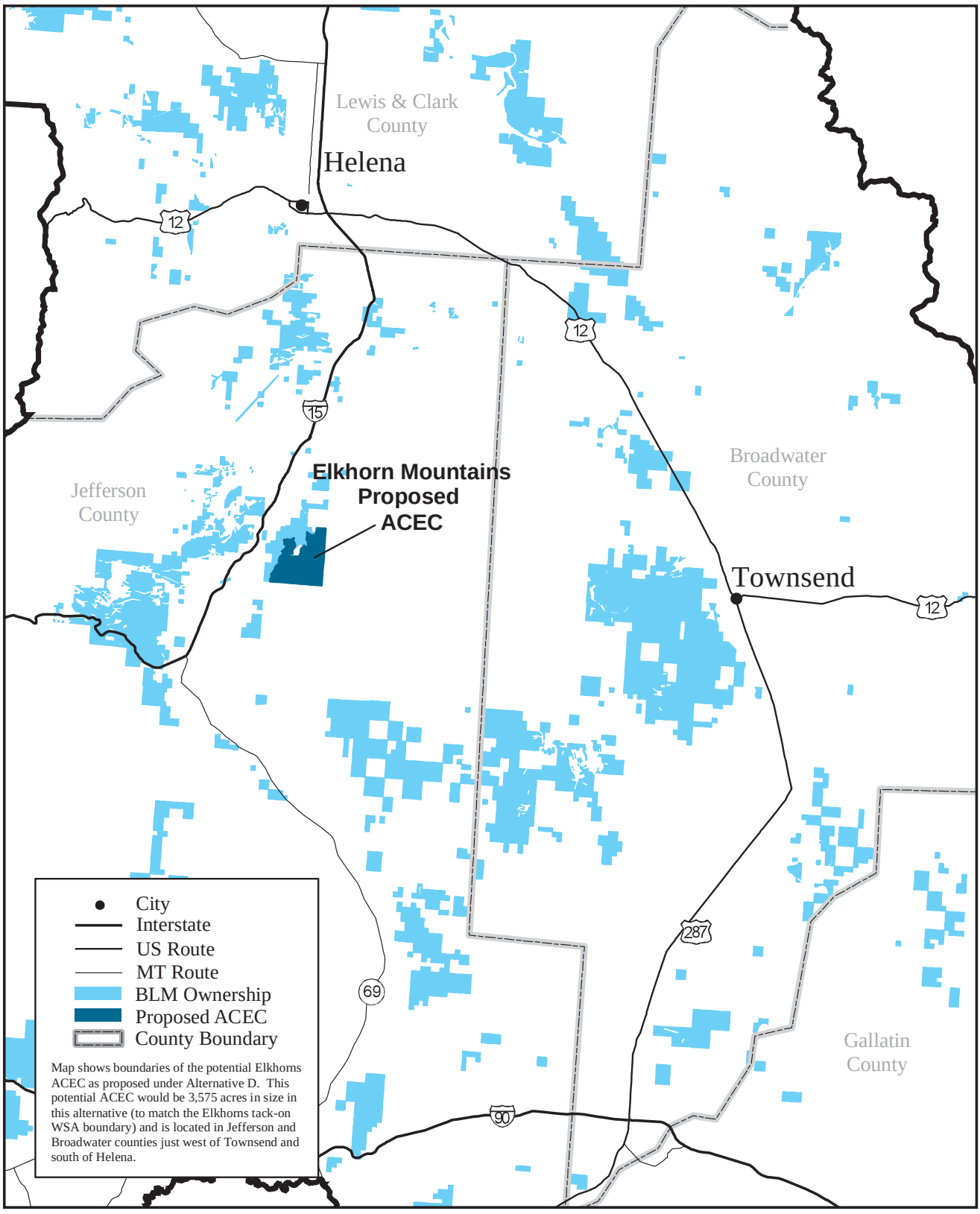
- Salable minerals sales would be allowed in a way that minimizes impacts to wildlife and recreation.

#### Vegetation Management

- *No timber salvage would be allowed unless beneficial to ACEC values or needed for human safety.*

#### Wildlife

- *The current direction outlined in MOU signed by MFWP, the USFS and the BLM would be followed within the existing WSA boundary.*
- The Muskrat and Nursery Creek drainages would be managed as an ecological unit for the purpose of sustaining ecological systems, including the full

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**Map 35: Elkhorn Mountains Proposed Areas of Critical Environmental Concern (ACEC) Under Alternative D**

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range of potential biological diversity and ecosystem processes.

- ❖ *Wildlife and wildlife habitats would be managed to support populations of species associated with endemic vegetative communities, with emphasis on providing the necessary habitat components for those species with special needs.*
- Management activities would have long-term benefits to wildlife and would minimize short-term impacts (with the exception of mining where long-term impacts could potentially occur).
- BLM would seek opportunities to convert sheep allotments to cattle allotments to protect bighorn sheep populations.
- BLM would continue to actively participate in partnerships.
- Activity timing restrictions with burning, noise and ground disturbance would be enforced to protect wildlife.

**Fire**

- ❖ *BLM would seek opportunities with surrounding landowners (private/FS) to allow natural fires to burn when within established prescriptions.*
- BLM would continue following the existing Elkhorns Fire Management Plan but would evaluate all opportunities for natural fire use.

**Livestock Grazing**

- BLM would provide priority management to ensure against unauthorized livestock grazing (maintain/build boundary fences, cattle guards and closely monitor livestock trailing).
- Management activities would only be allowed to maintain or enhance ecosystems, natural qualities, and scenic values.

**Cultural**

- BLM would refrain from developing any additional roads to prevent further degradation to historic ditches, dams, and reservoirs.

## NATIONAL TRAILS

**Goal –** Manage National Trails to promote public enjoyment and protect their designated values.

### Management Common to All Alternatives

The Continental Divide Trail would be managed cooperatively with the USFS in accordance with national policy guidelines. The Lewis and Clark Historic Trail would be managed cooperatively with the National Park Service (NPS) in accordance with national policy guidelines.

BLM would seek opportunities to cooperatively manage National Trails through partnerships.

BLM would continue cooperative efforts with PPLM and other partners to collectively manage the Lewis and Clark National Historic Trail under the Missouri/Madison Comprehensive Recreation Plan. All recreation sites within the trail corridor would continue to be managed in a manner that promotes public accessibility, resource protection, visitor safety, and interpretive education.

### Alternative A – No Action

No ROS, VRM, or specific travel management plans (with the exception of Sleeping Giant) would be developed to guide the future management of the two National Trails (Continental Divide National Scenic Trail and Lewis and Clark National Historic Trail). Protective measures for these trail settings and associated experiences would continue to be applied through resource use project plans. The Continental Divide Trail segment would continue to be managed for both motorized and non-motorized uses.

### Management Common to Action Alternatives (B, C, and D)

The two National Trails (Continental Divide National Scenic Trail and Lewis and Clark National Historic Trail) would be managed to protect natural resource values, minimize recreation conflicts, and enhance recreation opportunities and experiences. Lands within these extensive corridors would be retained in public ownership. Additional management guidance would be established in accordance with the ROS classes, VRM classes, travel plan direction, and oil and gas stipulations established under the action alternatives.

BLM would evaluate opportunities to re-route the Continental Divide Trail segment in coordination with the USFS to enhance non-motorized opportunities; reduce current needs for use easements/acquisitions through private lands; and remove motorized conflicts associated with the motorized road.

## WILD AND SCENIC RIVERS

**Goal –** Identify river segments suitable for inclusion in the National Wild and Scenic River System.

### Management Common to All Alternatives

In cooperation with other agencies, local governments, and special interest groups, management would be conducted in a manner to protect and enhance the outstandingly remarkable values for each suitable river segment. **Table 2-19** depicts the outstanding remarkable values and tentative classifications of the four eligible Wild and Scenic River segments. Additional information

is provided in **Appendix J – National Wild and Scenic Rivers**.

**Table 2-19**
**Eligible Wild and Scenic River Segments**

| WSR Segment Name | Outstanding Remarkable Values | Tentative Classification |
|---|---|---|
| Upper Big Hole River | Recreational, Fish | Recreational |
| Missouri River | Recreational, Wildlife, Scenic | Scenic |
| Moose Creek | Recreational, Scenic | Scenic |
| Muskrat Creek | Fish | Scenic |

## Alternative A – No Action

The suitability study of the four river segements in the Field Office determined to be eligible for designation in the National Wild and Scenic River System (**Map 36**) would not be completed and protective management would continue indefinitely on all four river segments (Upper Big Hole River - 2.3 miles, Missouri River – 3.1 miles, Moose Creek – 4.0 miles, and Muskrat Creek – 2.6 miles). Protective management would be subject to valid existing rights and to actions within BLM's authority. A case-by-case review of proposed activities would be completed to ensure that Wild and Scenic River eligibility and tentative classification would not be affected. Protective management objectives would include:

- Free-flow characteristics would not be modified by stream impoundments, diversions, channelization, or riprapping.
- Each segment would be managed to protect identified outstandingly remarkable values, and to the extent practicable such values would be enhanced. Development of the eligible river and its corridor would not be modified to the extent that the eligibility or tentative classification would be affected.

## Management Common to Action Alternatives

Suitability studies were conducted for the four eligible river segments (Big Hole River, Missouri River, Moose Creek, and Muskrat Creek) to determine whether any or all of these areas should be recommended to Congress for inclusion into the NWSRS. These suitability recommendations vary under the three action alternatives. See **Appendix J** for additional information about these areas and the study process.

## Alternative B - Preferred Alternative

Under Alternative B, Muskrat Creek (2.6 miles) would be recommended as suitable for inclusion in the National Wild and Scenic Rivers System (NWSRS). Missouri River (3.1 miles) would be found preliminarily suitable, but would only be recommended for inclusion in the NWSRS pending USFS (Helena National Forest) concurrence and coordination. This river segment is bordered by BLM lands on one side and Helena National Forest lands on the other. A joint recommendation by BLM and the USFS would be necessary to forward the Missouri River segment as suitable for inclusion in the NWSRS. The Upper Big Hole River and Moose Creek would be identified as non-suitable for inclusion.

The following protective management under the Wild and Scenic Rivers Act would be applied to Muskrat Creek until it is either designated by Congress or released to multiple use. This management would also be applied to the Missouri River until the possibility of recommending it for NWSRS designation is resolved with the USFS. The direction would continue to apply if the Forest Service supports recommending a designation. Protective management would be subject to valid existing rights and to actions within BLM's authority. A review of proposed activities would be completed to ensure that Wild and Scenic River eligibility and tentative classification would not be affected.

Protective management objectives would include:

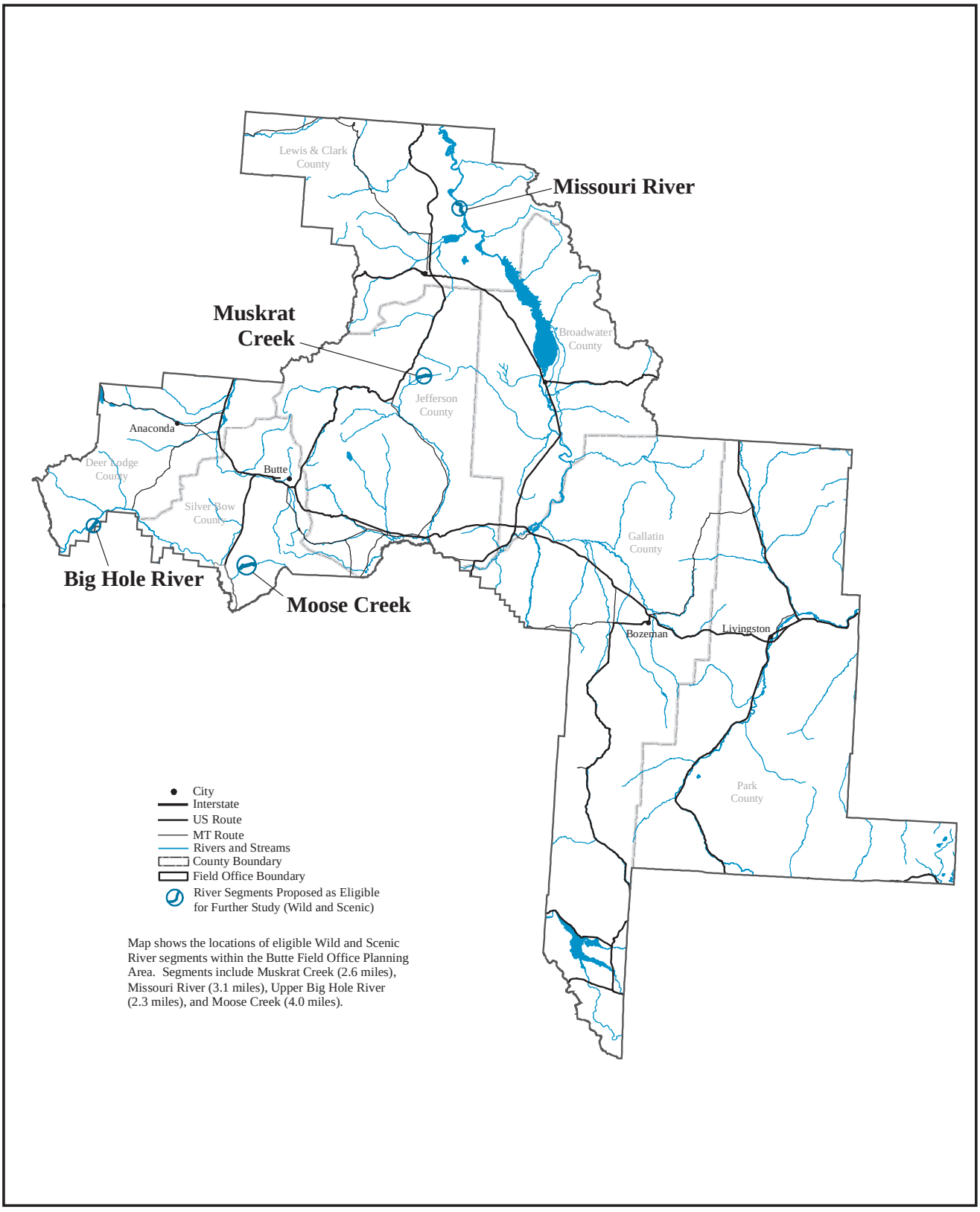
- Free-flow characteristics would not be modified by stream impoundments, diversions, channelization, or riprapping.
- Each segment would be managed to protect identified outstandingly remarkable values, and to the extent practicable such values would be enhanced.
- Development of the eligible river and its corridor would not be modified to the extent that the eligibility or tentative classification would be affected.

## Alternative C

Under Alternative C all four eligible river segments (totaling 12 miles) would be recommended as suitable for inclusion in the National Wild and Scenic Rivers System.

The following protective management under the Wild and Scenic Rivers Act would be applied to these rivers until they are either designated by Congress or released to multiple use. Protective management would be subject to valid existing rights and to actions within BLM's authority. A case-by-case review of proposed activities would be completed to ensure that Wild and Scenic River eligibility and tentative classification would not be affected. Protective management objectives include:

- Free-flow characteristics would not be modified by stream impoundments, diversions, channelization, or riprapping.
- Each segment would be managed to protect identified outstandingly remarkable values, and to the extent practicable such values would be enhanced.




Map shows the locations of eligible Wild and Scenic River segments within the Butte Field Office Planning Area. Segments include Muskrat Creek (2.6 miles), Missouri River (3.1 miles), Upper Big Hole River (2.3 miles), and Moose Creek (4.0 miles).

0 Miles 40

Map Scale 1:1,500,000

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**Map 36: National Wild and Scenic River System Eligible Segments**

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Development of the eligible river and its corridor would not be modified to the extent that the eligibility or tentative classification would be affected.

## Alternative D

Under Alternative D all four of the eligible river segments would be identified as non-suitable for inclusion in the National Wild and Scenic River System. These river segments and their associated corridors would be managed in accordance with the prescriptions described throughout Alternative D rather than under the protective management objectives for eligible or suitable rivers.

# WILDERNESS STUDY AREAS

**Goal –** Manage Wilderness Study Areas (WSAs) to maintain their suitability for potential wilderness designation.

## Management Common to All Alternatives

All BLM lands were evaluated to determine whether additional lands other than existing WSAs have wilderness characteristics (blocks of land at least 5,000 acres in size with naturalness and opportunities for primitive and unconfined recreation). Lands obtained through acquisitions since previous wilderness reviews were considered in concert with pre-existing BLM lands. No additional BLM lands were identified as having wilderness characteristics because no areas with naturalness and opportunities for primitive and unconfined recreation met the size criteria.

All six WSAs (Humbug Spires – 11,320 acres, Sleeping Giant – 6,666 acres, Sheep Creek – 3,801 acres, Black Sage – 5,917 acres, Elkhorn Tack-on – 3,575 acres, and Yellowstone River Island – 69acres) would continue to be managed under the Interim Management Policy and Guidelines for Lands under Wilderness Review (BLM Handbook H-8550-1 dated 1995) until such time as Congress either designates them as wilderness or releases them from further consideration as wilderness. The wilderness characteristics (naturalness, outstanding opportunities for solitude, and outstanding opportunities for primitive and unconfined recreation) of each of the six WSAs would continue to be protected under the IMP directives.

Those areas designated wilderness by Congress would be managed per the Wilderness Act of 1964, as amended, Public Law 88-577 (16 United States Code 1131-1136). In addition, an area-specific wilderness management plan would be developed.

WSAs would continue to be managed in accordance with the established monitoring and sign plans for each WSA.

In addition to the Interim Management Protection mandates, both the Sleeping Giant and the Sheep Creek WSAs would continue to be managed as part of the Sleeping Giant ACEC and management plan written in 1988.

## Alternative A – No Action

All six WSAs would continue to be managed under the Interim Management Policy and Guidelines. This alternative assumes that no Congressional action would occur to designate or release these WSAs.

All areas are under consideration by Congress. Portions of Humbug Spires, all of Sleeping Giant, and all of Sheep Creek were recommended to Congress as suitable for wilderness designation. The Black Sage and Yellowstone River Island Wilderness Study Areas were recommended by BLM as unsuitable. The Elkhorn Tack-on WSA has not been studied for wilderness suitability, and its existence under the wilderness review process is dependent upon the adjoining USFS lands which are under wilderness review. BLM would complete a suitability study for this WSA if the FS recommends its adjacent lands for wilderness through its Land Use Plan. No recommendation currently exists.

## Management Common to Action Alternatives (B, C, and D)

WSAs released from further consideration as wilderness would be managed consistent with surrounding lands and prescriptions identified in the land use plan alternatives. Release management is described for each WSA in the specific alternative descriptions below.

Under all action alternatives the Sleeping Giant, Sheep Creek, Humbug Spires, and Elkhorns Tack-on WSAs would be managed as ACECs. These administrative designations would promote continued protection of the existing wilderness characteristics for these four areas.

In the event that WSAs designated as ACECs become designated as wilderness, ACEC management would be dropped upon development of wilderness management plans. See ACEC section for detailed descriptions of proposed ACEC management of these areas.

Should the FS lands adjacent to the Elkhorns Tack-on be removed from wilderness review, this Section 202 (FLPMA) WSA would be dropped from further wilderness consideration. This small WSA is not capable of providing outstanding opportunities for solitude or primitive and unconfined recreation on its own.

Protection of the wilderness characteristics for Black Sage and the Yellowstone River WSAs varies under each of the action alternatives.

## Alternative B – Preferred Alternative

The Black Sage and Yellowstone River Island WSAs would continue to be managed under the Interim Man-

agement Policy Guidance for WSAs. In the event that Congress releases these two areas from wilderness consideration, these areas would be managed as described below for Alternative B.

### *Black Sage – MT-075-115*

The Black Sage WSA would continue to be managed to provide semi-primitive, motorized recreation opportunities. Motorized travel within the area would be limited and the availability of established routes would be determined through an area-specific travel management plan. New permanent roads would not be authorized although re-routes may be considered to minimize resource impacts, public safety issues, or access concerns. The visual resource classification of the area would be modified from VRM Class I to VRM Class II management.

Land ownership would be managed for retention and exchanges would be considered to improve its configuration and manageability. The area would be open to rights-of-way subject to mitigations. Management would emphasize restoration and maintenance of natural processes and conditions when considering the appropriateness of other resource uses. Locatable minerals would be open and subject to undue or unnecessary degradation as per discussion below for the island. All salable and leasable minerals with the exception of oil and gas would remain unavailable. Oil and gas development would be subject to Field Office wide stipulations developed for Alternative B. All other resources and uses would be managed in accordance with Alternative B management direction.

### *Yellowstone River Island – MT-075-133*

The Yellowstone Island would continue to be managed to provide semi-primitive, non-motorized recreation opportunities. The island would remain closed to motorized travel. The visual resource classification of the area would be modified from VRM Class I to VRM Class II management. Land ownership would be managed for retention and would be closed to rights-of-way.

The island would be open to locatable mineral entry subject to requirements to prevent unnecessary and undue degradation. Oil and gas development activities would be subject to stipulations described Field Office wide for Alternative B. This area would be closed to all other leasable and salable mineral actions. Livestock grazing and forest management practices would not be allowed. All other resources and uses would be managed in accordance with Alternative B management direction.

## Alternative C

The Black Sage and Yellowstone River Island WSAs would continue to be managed under the Interim Management Policy Guidance for WSAs. In the event that Congress releases these two areas from wilderness consideration, these areas would be managed as described below for Alternative C.

### *Black Sage – MT-075-115*

Management would be the same as described under Alternative B for ROS, motorized travel, VRM, land ownership, and salable and leasable minerals other than oil and gas. Oil and gas stipulations described Field-Office wide for Alternative C would apply. All other resources and uses would be managed in accordance with Alternative C management direction.

### *Yellowstone River Island – MT-075-133*

Management would be the same as described under Alternative B for ROS, motorized travel, VRM, land ownership, rights-of-ways, minerals, livestock grazing and forest management. Oil and gas development activities would be subject to stipulations described Field Office wide for Alternative C. All other resources and uses would be managed in accordance with Alternative C management direction.

## Alternative D

The Black Sage and Yellowstone River Island WSAs would continue to be managed under the Interim Management Policy Guidance for WSAs. In the event that Congress releases these two areas from wilderness consideration, management of these areas is described below for Alternative D.

### *Black Sage – MT-075-115*

The area would be open to salable and leasable minerals including oil and gas. Oil and gas development activities would be subject to stipulations described Field Office wide for Alternative D. Management would be the same as described under Alternative B for ROS, motorized travel, VRM, land ownership, and rights-of-way. All other resources and uses would be managed in accordance with Alternative D management direction.

### *Yellowstone River Island – MT-075-133*

The island would be available for land adjustment, and salable and leasable minerals. Oil and gas development activities would be subject to stipulations described Field Office wide for Alternative D. Management would be the same as described under Alternative B for ROS, motorized travel, VRM, rights-of-way, locatable minerals, oil and gas, livestock grazing and forest management. All other resources and uses would be managed in accordance with Alternative D direction.

# MANAGEMENT CONCERNS

## AIR QUALITY

**Goal –** Ensure BLM authorizations and management activities protect the local quality of life and sustain economic benefits by complying with tribal, local, state,

and federal air quality regulations, requirements and implementation plans.

## Management Common to All Alternatives

BLM would continue to participate in local, state, and federal ambient air quality monitoring programs, as required. Management of non-attainment areas within the Planning Area would be guided by the state.

BLM would comply with local, state, and federal regulatory requirements.

All resource uses would meet the Land Health Standards for air quality.

Management would minimize or prevent air quality degradation throughout the Planning Area by applying mitigation measures to projects.

Air resources would continue to be evaluated on a case-by-case basis as part of project level planning to ensure compliance with local, state, and federal regulatory requirements. Evaluations would consider the significance of the proposed project and the sensitivity of air resources in the affected area. Mitigation measures would be developed as appropriate to ensure compatibility of projects with air resource management.

Before approval of an application for permit to drill (APD) for oil and gas or a Sundry Notice application that would involve surface disturbance, the appropriate level of NEPA analysis (in most cases an EA) would be completed. This document would analyze effects on all appropriate resources and resource uses including air quality as identified.

## SOIL RESOURCES

**Goal 1 –** Manage uses to minimize accelerated soil erosion and compaction and maintain surface soil water infiltration based on site-specific conditions.

**Goal 2** – Maintain or improve soil health and fertility, prevent or minimize erosion and compaction while supporting multiple use management.

## Management Common to All Alternatives

Soil management objectives would include:

- Reduce soil erosion associated with steeper slopes, granitic soils, and high recreational use areas.
- Reduce sediment delivery to creeks and streams.
- Reduce soil mass movement (primarily from accelerated water erosion) resulting from burned areas, aboveground disturbances (primarily roads), and accelerated streambank erosion.

BLM would continue to implement soil conservation and BMPs to meet these management objectives. Examples of BMPs that would be applied throughout the BFO include:

- Seasonal or yearlong closures of specific road and trail sections to reduce soil erosion.
- Design, enhancement, and maintenance of vegetated filter strips along critical waterways.
- Integration of soil, groundwater, and surface water management to minimize stream channel degradation and improve groundwater and surface water quality.

Soil conservation practices and soil BMPs would provide the basis for maintaining soil productivity, fertility, and stability, and maximizing infiltration of natural precipitation and minimizing runoff, soil erosion, and sedimentation.

Consideration of soil conditions and types and their influence on management actions would occur on a case-by-case basis. Best Management Practices and mitigation measures would be implemented at the site-specific project level to maintain or improve the soil resource. Soils susceptible to compaction and erosion would receive greater consideration when assessing proposed activities.

Soil compaction and erosion problems would be diagnosed using Land Health Standards.

Appropriate mitigation or seasonal restrictions would be applied to activities in areas with significant soil compaction or accelerated erosion.

## Management Common to Action Alternatives (B, C, and D)

BLM would reseed disturbed areas where needed.

## WATER RESOURCES

**Goal 1 –** Restore and/or maintain the chemical, physical, and biological integrity of water resources to protect designated beneficial uses and achieve water quality standards.

**Goal 2** – Maintain existing or acquire new water rights land in the Decision Area to ensure water availability for multiple-use management.

**Goal 3** – Minimize erosion and subsequent sedimentation for improved stream and watershed health.

**Goal 4** – Maintain or improve morphological conditions to a stable state that can fully support beneficial uses.

**Goal 5** – Protect water quality for municipal, industrial, agricultural, recreation, and residential purposes by adopting protective measures to meet tribal, state, and local water quality requirements.

## Management Common to All Alternatives

Management would seek to prevent water quality degradation, and improve watershed function throughout the Planning Area.

The objective on Decision Area lands would be for water bodies to have measurable attributes within site-specifically appropriate ranges (including meeting state, tribal, and local water quality standards). From a morphological standpoint these ranges may be based on reference conditions or other scientifically accepted methods. For proper functioning condition in streams, entrenchment, width/depth ratio, sinuosity, channel substrate, and slope should be within the ranges identified for channel types.

The Land Health Standards would be implemented to ensure water quality meets state standards and beneficial uses are protected or restored. BMPs would be used to prevent non-point source water pollution and mitigation measures would be applied on a case-by-case basis. Permits pertaining to projects affecting water quality, wetlands, or streams would be obtained, and outside applicants would be required to provide copies of pertinent permits prior to BLM authorization.

BLM would continue to coordinate and cooperate with Montana Department of Environmental Quality (MDEQ) and communities in the development of Water Quality Restoration Plans and Source Water Protection Plans.

BLM would use the State of Montana BMPs to address non-point source water pollution (**Appendix E – BMPs**).

BLM would comply with the non-degradation provisions of the Montana Water Quality Act.

Projects would be reviewed on a case-by-case basis to minimize impacts to water quality. BLM would use "reasonable land, soil, and water conservation practices" to prevent harm to public health, recreation, safety, welfare, livestock, wild animals, birds, fish, or other wildlife prior to the adoption of a water quality restoration and TMDL plans.

Water rights and instream flow reservations would be maintained subject to Montana water law. BLM would participate in the Montana Statewide water adjudication process and comply with Montana law for water rights.

## Alternative A – No Action

There is no additional management in this alternative beyond that described above in "Management Common to All Alternatives."

## Management Common to Action Alternatives (B, C, and D)

Existing water rights would be maintained to ensure water availability for multiple-use management and proper functioning riparian and upland areas.

Water quality would be monitored to establish baseline conditions, identify areas of concern, and document progress from mitigation measures.

BLM would participate in the development, implementation and monitoring of water quality restoration plans and TMDL plans in watershed Planning Areas in which BLM is a significant land manager or water user.

## Alternative B – Preferred Alternative

BLM would examine "Water Quality Restoration Plans" (Plans) to determine if reduction targets of pollutants (TMDLs) are reasonable and attainable. Plans would be implemented as funding becomes available.

BLM would consider acquiring water rights from willing sellers.

Burned areas would be monitored for weed infestations and accelerated soil erosion. Where sedimentation impacts adjacent streams, erosion would be remediated.

## Alternative C

BLM would reduce pollutants in streams to levels indicated in "Water Quality Restoration Plans." Plans would be implemented as funding becomes available.

BLM would consider acquiring water rights from willing sellers.

Burned areas would be monitored for weed infestations and accelerated soil erosion. Accelerated soil erosion and sedimentation in burned areas would be remediated.

## Alternative D

BLM would continue present levels of stream restoration activities. Progress of past actions to improve water quality would be monitored.

## VISUAL RESOURCES

**Goal 1 –** Manage visual resources in accordance with VRM classifications described in **Appendix C – VRM**.

## Management Common to All Alternatives

Under all alternatives, visual resources would be managed according to established guidelines for VRM classes as described in **Appendix C – VRM**.

Visual resource design techniques and best management practices would be used to minimize short and long-term visual impacts.

Contrast ratings would be completed for proposed projects in Class I and II areas, and for proposed projects in Class III and IV that are high impact projects or located in highly sensitive areas.

VRM Class I objectives for all WSAs would be maintained.

## Alternative A – No Action

Visual resources would continue to be evaluated as part of activity and project planning. Such evaluation considers the significance of the proposed project and the visual sensitivity of the affected area. Mitigation measures would be attached as appropriate to assure compatibility of projects with management objectives for visual resources.

Under the continuation of current management, visual resources in the Decision Area would be managed as follows:

Approximately 31,500 acres, including the six WSAs, would be managed as VRM Class I.

All lands along the Yellowstone River, Missouri River (Upper Holter Lake to Spokane Hills), Upper Big Hole River Corridor (0.5 miles from each bank) and the Sleeping Giant ACEC totaling about 25,400 acres, would continue to be managed as VRM Class II.

All remaining lands totaling about 250,400 acres would be managed as VRM Class III and IV. This acreage increased since release of the Draft RMP due largely to the recent acquisition of the Iron Mask property near Townsend. These areas would continue to be evaluated and protected on a case-by-case basis through project/activity plans.

## Management Common to Action Alternatives

Management classifications would be established for all BLM lands based on visual resource characteristics (scenic quality, sensitivity level and distance zones) and management considerations. Generally, areas that have lower VRM classifications have higher visual resource values and protection measures. (Note: Under all action alternatives, 5,300 acres have been added to the VRM Class II category between the Draft RMP and the Proposed RMP. These acres are predominantly newly acquired lands in the Iron Mask acquisition near Townsend.)

## Alternative B - Preferred Alternative

Under Alternative B, the majority of lands in the Decision Area would be managed under VRM Class III. VRM Class II would be increased by 18,200 acres while VRM Classes III and IV would be decreased accordingly as compared to Alternative A. Under Alternative B, objectives for visual resources would be to manage Decision area lands in accordance with the following acreages by VRM classes:

- Approximately 31,500 acres would be managed as VRM Class I. These lands include all six WSAs.
- Approximately 48,900 acres would be managed as VRM Class II.
- Approximately 125,200 acres would be managed as VRM Class III.
- Approximately 101,700 acres would be managed as VRM Class IV.

**Map 37** depicts the location of these classes throughout the Decision Area.

## Alternative C

Under Alternative C, objectives for visual resources would be to manage Decision Area lands as follows:

- Approximately 31,500 acres would be managed as VRM Class I, including all WSAs.
- Approximately 67,600 acres would be managed as VRM Class II.
- Approximately 151,700 acres would be managed as VRM Class III.
- Approximately 56,500 acres would be managed as VRM Class IV.

**Map 38** depicts the location of these classes throughout the Decision Area. This alternative promotes additional protection of visual resources and therefore has the highest acreages proposed under VRM Classes I and II.

## Alternative D

Lands managed under VRM Class IV would increase in comparison to Alternatives B and C, but would still be less than under Alternative A, while VRM Classes II and III would decrease slightly.

Under Alternative D, objectives for visual resources would be to manage Decision Area lands as follows:

- Approximately 31,500 acres would be managed as VRM Class I, including all WSAs.
- Approximately 6,600 acres would be managed as VRM Class II.
- Approximately 142,900 acres would be managed as VRM Class III.
- Approximately 126,300 acres would be managed as VRM Class IV.

This alternative has the highest acres proposed under Classes III and IV. **Map 39** depicts the location of these classes throughout the Decision Area.

# CULTURAL RESOURCES, TRADITIONAL CULTURAL PROPERTIES AND PALEONTOLOGICAL RESOURCES

**Goal 1** – Identify cultural resource sites, traditional cultural properties, and paleontological localities and mitigate impacts from natural or human-caused deterioration.

**Goal 2** – Preserve and protect eligible cultural resource sites, traditional cultural properties, and paleontological localities to ensure that they are available for appropriate uses by present and future generations.

## Management Common to All Alternatives

### *Cultural Resources and Traditional Cultural Properties*

At the project level, the BLM would conduct inventories for the purpose of gathering resource information, as per Section 106 of the National Historic Preservation Act, in order to avoid disturbance to cultural resources in the Area of Potential Effect (APE). The BFO would continue Section 106 compliance by working through the State Protocol Agreement with the Montana State Historic Preservation Office. BLM would continue to make determinations of eligibility or non-eligibility for historic properties on land it manages and document all inventories and decisions effecting cultural resources in an annual report. If the project cannot be redesigned to avoid disturbance, the sites would be evaluated for their eligibility for listing on the National Register for Historic Places. If eligible sites cannot be avoided, the BLM would, in consultation with the Montana State Historic Preservation Office, facilitate mitigation to recover data that would otherwise be lost. The BLM would also conduct inventories to gather information about cultural resources, as per Section 110 of the National Historic Preservation Act.

BLM's consultation process for historic mining sites would continue in accordance with the Historic Placer and Lode Mining Properties Programmatic Agreement that among other things specifies creation of a historic preservation plan to organize and compile what is known about various historic mining districts.

BLM would continue to work with Native American tribal governments and their representatives, as well as those members who are recognized cultural leaders, elders, and Tribal Historic Preservation Officers. In addition to cultural resource specialists, the BLM would include other tribal resource specialists who may have an interest in project planning and management issues. Tribal consultation would be most frequent with those entities who historically occupied the Planning Area. Meeting with tribal representatives would be conducted at least once a year to coordinate consultation requirements and to maintain a good working relationship.

All recorded sites would be assigned a use category to facilitate management of those cultural resources. See Definitions of Use Categories in **Appendix K – Cultural Resources**, section .42, A-F.

### *Paleontological Resources*

Fossil localities would be afforded the same consideration as historic sites in project planning, and if localities are in the Area of Potential Effect, then projects would be redesigned where feasible in accordance with FLPMA and BLM Manual Section 8270 (USDI-BLM 1998). If projects cannot be redesigned to avoid fossil localities, then specimens would be excavated by permitted paleontologists. Assistance from permitted institutions and/or individuals would be routinely sought in order to properly map and record fossil localities.

Opportunities for public outreach and education would be pursued as staffing and funding resources permit.

## Alternative A – No Action

### *Cultural Resources and Traditional Cultural Properties*

BLM would continue a dedicated program to inventory 100 acres per year to meet obligations under Section 110 of the National Historic Preservation Act.

BLM would continue to provide public outreach and interpretive information on Montana prehistory and history at developed areas, and recreational and interpretive opportunities at significant historic sites with easy access to the public.

### *Paleontological Resources*

At the project level, BLM would continue to map fossil localities so as to avoid those localities during project implementation. If the locality cannot be avoided, permitted institutions or individuals would be contacted to properly map, record, and/or recover, if necessary, paleontological resources. Public education and outreach would be conducted as time and funding permit.

## Management Common to Action Alternatives

During the oil and gas leasing process, the following stipulation IM 2005-003 will be attached to lease parcel review documents: This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM would not approve any ground disturbing activities that may affect any such properties or resources until it completes its obligations under applicable requirements of the NHPA

and other authorities. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized, or mitigated.

## Alternative B – Preferred Alternative

### *Cultural Resources and Traditional Cultural Properties*

As an inventory objective, BLM would identify areas with a high potential for various archeological/historical site types, and conduct 200 acres of proactive inventory in those areas each year. One hundred acres of low potential areas would be inventoried each year for comparison.

Educational and public outreach programs on cultural resources would be provided as requested.

Eligible historic buildings would be maintained consistent with National Park Service standards as funding permits. Deteriorating cultural resources falling under the Experimental or Scientific Use Categories eligible for listing on the National Register of Historic Places would be mitigated by intensive recordation or data recovery.

### *Paleontological Resources*

Direction for managing paleontological resources would be the same as Alternative A.

## Alternative C

### *Cultural Resources and Traditional Cultural Properties*

As an inventory objective, BLM would identify areas with a high potential for various archeological/historical site types, and conduct 1,000 acres of proactive inventory in those areas. Three hundred acres of low potential areas would be inventoried each year for comparison.

Educational and public outreach programs would be provided for cultural and paleontological resources.

BLM would develop volunteer agreements with local universities and interest groups to sponsor research and assist with fieldwork and maintenance responsibilities.

Eligible historic buildings would be maintained consistent with National Park Service standards as funding permits.

### *Paleontological Resources*

At the project level, BLM would continue to map fossil localities so as to avoid those localities during project implementation. If the locality cannot be avoided, permitted institutions or individuals would be contacted to properly map, record, and/or recover, if necessary, paleontological resources. BLM would cooperate with permitted institutions and/or individuals to map and record fossil localities.

## Alternative D

### *Cultural Resources and Traditional Cultural Properties*

BLM would conduct proactive inventories of archeological/historical sites as time permits.

Educational and public outreach programs would be provided as requested.

### *Paleontological Resources*

Direction for managing paleontological resources would be same as for Alternatives A and B.

# LANDS AND REALTY

**Goal 1** – Look for opportunities to acquire non-federal land or interest in non-federal land with important resources and resource uses.

**Goal 2** – Provide land-use opportunities contributing to a sustained flow of economic benefits and meet local infrastructure needs while protecting or minimizing adverse impacts to resources and resource uses.

## LAND USE AUTHORIZATIONS

## Management Common to All Alternatives

Land uses would be authorized by various means such as right-of-way grants, road use agreements and associated temporary use permits under several different authorities; leases, permits, and easements under section 302 of the Federal Land Policy and Management Act of 1976 (FLPMA); airport leases under the Act of May 24, 1928; and Recreation and Public Purposes (R&PP) leases. R&PP transfers are handled below under the *Land Ownership Adjustment* section.

Requests for land use authorizations would be analyzed and mitigation measures applied on a case-by-case basis in compliance with the NEPA process. Interim management policy and guidelines for land use authorizations in WSAs would be followed as appropriate. In accordance with current policy, land use authorizations would not be issued for uses which would involve the disposal or storage of materials which could contaminate the land (hazardous waste disposal sites, landfills, rifle ranges, etc.). Rights-of-way, leases, permits, or easements would not be required for those activities that are considered casual use of public lands.

New right-of-way facilities would be located within or adjacent to existing rights-of-way, to the extent practicable, in order to minimize adverse environmental impacts and the proliferation of separate rights-of-way. Right-of-way applications across roads that have been closed or

have seasonal restrictions would be analyzed on a case by case basis.

New communication site users would be grouped into existing facilities at established communication sites to reduce impacts and expedite application processing. Site plans would be completed prior to authorizing communication site uses in new areas. The use of alternative power sources would be considered where electric power is not available.

Section 368 of the Energy Policy Act of 2005 directs that the Secretary of the Interior, Department of Energy (DOE), USDA, Department of Commerce, and Department of Defense work together to identify energy corridors on federal land in the 11 western states. BLM is co-lead with DOE in the preparation of the Interagency West-wide Energy Corridor Programmatic EIS (PEIS) which is currently being prepared by an Interagency Corridor Planning Team. The Final PEIS will provide plan amendment decisions that will address numerous energy corridor related issues, including the utilization of existing corridors (enhancements and upgrades), identification of new corridors, supply and demand considerations, and compatibility with other corridor and project planning efforts. Decisions from this PEIS would be followed and implemented on Decision Area lands.

BLM would provide recreation and public purposes leases or patents on BLM land that meets classification criteria.

Proposals for renewable energy development would be considered on a case-by-case basis. No proposals for alternative energy development, other than wind power are anticipated to occur in the foreseeable future. Two areas, one near Whitehall and one near Livingston, are anticipated to have wind energy development in the future (**Map 40**). Guidelines and Best Management Practices (BMPs) from the Wind Energy Development Programmatic EIS (ROD signed December 2005) would be used when considering wind energy projects on BLM land. The latest version of *Suggested Practices for Raptor Protection on Power Lines* (APLIC 1996) would be implemented in the construction and operation of right-of-way facilities.

Owners of non-Federal land surrounded by public land managed under FLPMA would be allowed a degree of access across public land which would provide for the reasonable use and enjoyment of the non-Federal land.

The use of certain rights-of-way constructed on public lands prior to FLPMA would be recognized as a valid use even though the laws under which they were authorized were repealed by FLPMA. Recent regulations state that BLM would not renew grants issued before FLPMA. The holders of these authorizations must apply for a new FLPMA grant.

## Alternative A – No Action

There would be no utility corridors formally designated under the No Action alternative. The Headwaters RMP designated avoidance areas for utilities in the Scratchgravel Hills, Sleeping Giant/Holter Lake, and Limestone Hills areas. Generally, areas of high public recreation use, high scenic and wildlife values, and residential areas would be avoided. Under this alternative 74,489 acres would remain designated as avoidance and 952 acres would be identified as "windows" where existing major facilities cross avoidance areas.

## Management Common to Action Alternatives (B, C, and D)

The existing Communication Sites at Boulder, Bull Mountain, Limestone Hills, Montana City, Mt. Belmont, Toston, and Wickes would be formally designated as communication sites for the BFO. BLM would consider applications for new communications facilities and limit those uses to the designated sites. **Map 40** shows the existing sites. Any new facilities to be located within the designated sites would be required to conform to the existing site plans and the designated uses identified on **Table 3-28** in Chapter 3. Once the designated communications sites are filled to near capacity, new site location(s) may be authorized after site management plans and appropriate site-specific NEPA analyses are completed.

No new rights-of-way would be authorized in identified exclusion areas (approximately 27,361 acres). New rights-of-way in identified avoidance areas would not be allowed unless there are no other routing options (approximately 75,626 acres). Valid existing rights-of-way in avoidance areas would be recognized and holders of such authorizations would be allowed to maintain their facilities (**Map 40**).

Two of the existing right-of-way corridors delineated in the 1992 "Western Regional Corridor Study", (updated in 2003), would be designated where they cross public lands. The corridors are each currently occupied by electrical transmission lines. Nominal corridor width for the north-south oriented corridor would be 1,320 feet in width either side of the centerline of the existing facilities. The east-west oriented corridor would be 660 feet in width either side of the centerline of the existing facilities. Applicants for electrical transmission lines 69kV and larger and pipelines 10 inches in diameter and greater would be encouraged to locate such facilities within these two designated corridors. Each corridor would be designated for power lines (above ground and buried), telephone lines, fiber optic lines, pipelines, access roads, and other linear type right-of-ways. Specific proposals would require site-specific environmental analysis and compliance with permitting processes. Right-of-way facilities would not be placed adjacent to each other if

safety, incompatibility issues, or conflicts were identified.

Access to and along right-of-way corridors and use areas necessary to maintain existing facilities and construct new facilities would be provided across public lands. Other uses of right-of-way corridors and use areas would be permitted to the extent that they did not interfere with or preclude the use of these locations for their intended purpose and were consistent with other portions of the plan.

New leases, permits, rights-of-way, and easements would be authorized in a manner consistent with meeting Land Health Standards and applicable Best Management Practices. Renewals of existing authorizations would be analyzed, and if required, special stipulations would be added to meet or move toward meeting Land Heath Standards. In addition, an attempt would be made to negotiate changes in existing authorizations which would meet or move toward meeting Land Health Standards.

## WITHDRAWALS AND CLASSIFICATIONS

### Management Common to All Alternatives

In compliance with Section 204(1) of FLPMA, existing withdrawals would be reviewed prior to the end of the withdrawal period or as otherwise required by law to determine if they should be extended, revoked, or modified. Withdrawals no longer needed, in whole or in part, for the purpose for which they were withdrawn would be recommended for revocation or modification. Other agency requests for withdrawal relinquishments, extensions, or modifications would be considered.

Department of Interior and BLM policy will be followed in the consideration of any new withdrawals. New withdrawal proposals would be considered where land would transfer from one federal agency to another or where resource values or agency investments are best protected by withdrawal. Lands proposed to be withdrawn should be the minimum area required for the intended use and where applicable alternative prescriptions such as the use of rights-of-way, leases, permits, or cooperative agreements are inadequate to protect the resource values.

A Legislative Environmental Impact Statement is currently being prepared by the Department of Army, in cooperation with the BFO, for the withdrawal of approximately 20,000 acres of BLM land in the Limestone Hills west of Townsend. These lands were segregated from the public land laws by the Federal Register Notice of August 13, 2007, and are not currently open to surface entry or mining for a period of two years from the date of publication of the notice. Under all alternatives, the Congressional action resulting from this proposal/Legislative Environmental Impact Statement would subsequently amend the Butte RMP.

Land classifications are required to determine the suitability of public lands for retention or transfer out of Federal ownership under a number of public land laws (Recreation and Public Purposes Act, Carey Act, Indian Allotments, Desert Land Entries, State Selections). The only one of these laws applicable in this Planning Area is the Recreation and Public Purposes Act. Classifications are essentially determinations of a parcel's greatest value, or highest utilization, and are based on criteria in 43 CFR 2400.

Land classifications, as "de facto" withdrawals, would also be reviewed to determine if they should be continued or terminated. Any remaining Classification and Multiple Use Act retention classifications would be terminated.

All new classifications would comply with the requirements of 43 CFR 1600 and criteria in 43 CFR 2400. There is a "Recreation and Public Purpose" classification on 200 acres at the old Deep Creek Ski Area in T2N, R12W, Section 20: E½SW¼, W½SE¼, SE¼SE¼. This area is no longer being used for recreation purposes and therefore this classification would be terminated. The Last Chance Handgunners at Boulder have expressed interest in a patent, under the Recreation and Public Purposes Act, to their shooting range in T6N, R5W, Section 24: Lot 2 and Section 25: NE¼NE¼NW¼. This parcel has already been classified as suitable for R&PP lease. Under all alternatives the R&PP classification would be revised to allow for R&PP patent.

A total of approximately 6,300 acres of land are withdrawn from locatable mineral entry (with some exceptions primarily for Public Water Reserves described in Chapter 3). These withdrawals include the Devil's Elbow (142 acres), Holter Lake (80 acres) and Ringing Rocks (160 acres) recreation areas, totaling 382 acres that would remain in effect under all alternatives in order to safeguard infrastructural investments; protect resource values; and ensure quality visitor use experiences.

### Alternative A – No Action

Withdrawals would be considered on a case-by-case basis, in accordance with current withdrawal and mineral policy.

### Alternative B

Priority for new withdrawals would be for all developed recreation sites followed by new acquisitions through exchange or purchase, and in ACECs to protect resources and values as needed, in accordance with current withdrawal and mineral policy.

Specific sites recommended for withdrawal from mineral entry are identified in the Locatable Minerals section, under Alternative B and C. Eight priority recreation sites are identified for withdrawal due to special existing or planned conditions such as exclusive public recreation

uses for camping and day-use activities, high level of infrastructural development, highly concentrated visitation, and limited size.

## Alternative C

Priority for new withdrawals would be for all developed recreation sites followed by new acquisitions through exchange or purchase, and in ACECs to protect resources and values as needed, in accordance with current withdrawal and mineral policy.

Specific sites recommended for withdrawal from mineral entry are identified in the Locatable Minerals section, under Alternative B and C. Eight priority recreation sites are identified for withdrawal due to special existing or planned conditions such as exclusive public recreation uses for camping and day-use activities, high level of infrastructural development, highly concentrated visitation, and limited size. Riparian areas in the Muskrat Creek drainage are also proposed for locatable mineral withdrawal to protect an important westslope cutthroat trout population.

## Alternative D

Withdrawals would be considered on a case-by-case basis in accordance with current withdrawal and mineral policy.

# LAND OWNERSHIP ADJUSTMENT

## Management Common to All Alternatives

Land ownership adjustment refers to those actions that result in the disposal of BLM-administered land and/or the acquisition of non-federal land or interests. In this context, BLM land is categorized as either "retention" or "disposal". Generally, lands in the retention category would be retained and managed by BLM and lands in the disposal category would be available for land ownership adjustment. Methods of adjustment include exchanges, sales, transfers, fee acquisition, and donation. Land ownership adjustments would be considered on a case-by-case basis.

Public lands with high resource values would generally be retained in federal ownership. All proposed land ownership adjustment actions would be analyzed in project specific environmental reviews.

Public access would be maintained or improved through all land ownership adjustment transactions. Land transfers to other public agencies would be considered where improved management efficiency would result. BLM lands could be made available for community expansion if there are no other lands available to communities.

Direct purchase would be limited to cases where no practical alternatives exist and high public values would be acquired. Land and interests in lands obtained with LWCF appropriation would not be available for disposal by any means, nor would it be open to mineral entry or mineral leasing.

The need to protect newly acquired lands would be considered as part of the analysis prior to acquisition. If withdrawn, acquired lands would be managed under the terms and conditions of the withdrawal. Disposal parcels would be made available for all means of disposal (sale, exchange, R&PP, etc.). Some lands identified for disposal could be retained in public ownership based on site-specific application of the land ownership adjustment criteria. (See **Appendix L – Lands**)

In addition to meeting the disposal criteria, lands to be sold would meet the following disposal criteria from FLPMA:

- Such land must be difficult and uneconomic to manage as part of the public land base, and must not be suitable for management by another federal department or agency.
- Such land must have been acquired for a specific purpose and must no longer be required for that or any other federal purpose.
- Disposal of such land would serve important public objectives that can only be achieved prudently or feasibly if the land is removed from public ownership and if these objectives outweigh other public objectives and values that would be served by maintaining such land in federal ownership.
- If land status updates identify additional parcels administered by BLM, those lands would be managed in the same manner as adjacent parcels or those in the same vicinity in regard to retention or disposal.
- Federal minerals underlying non-Federal surface would generally be retained in federal ownership. However, an exchange of this type of mineral estate may be considered on a case-by-case basis if found to be in the public interest. The sale of this type of mineral interest under section 209(b) of FLPMA could be considered only if the requirements of the same were met.

No BLM lands in the BFO are suitable for Desert Land Entry.

## Alternative A – No Action

Planning guidance with respect to land ownership adjustment would be the same as that provided by the 1984 Headwaters RMP and the 1979 Dillon MFP. Further and more specific guidance would be provided by the "Land Pattern and Land Adjustment, Supplement to the State Director Guidance for Resource Management Planning in Montana and the Dakotas, 1984" (USDI-BLM 1984b). This guidance was later amended by the 1989 State Director's guidance pertaining to access. This direction established land exchange as the predominant

method of land ownership adjustment. It also established retention, disposal, and acquisition criteria to be used in categorizing public land. Criteria in the supplement were used to identify retention and disposal zones within the Butte Planning Area. These zones would be applied in this alternative.

State Director Guidance for resource management planning in Montana and the Dakotas (USDI-BLM 1984b) provides criteria for retention or disposal, and for identifying acquisition priorities. Principle considerations would include public resource values, current use, and location, proximity to other agencies, manageability, and compatibility with adjacent land uses.

Non-Federal land to be acquired by the BLM through exchanges generally would be located in retention areas. BLM administered land to be sold would meet the disposal criteria identified in State Director Guidance and the criteria derived from FLPMA. The method of sale would be determined on a case-by-case basis with the goal of avoiding unnecessary hardships on current public land users and surrounding or adjacent landowners.

## Management Common to Action Alternatives (B, C, and D)

Lands would be categorized as either retention or disposal for management purposes. Specific land ownership adjustment criteria developed for retention, disposal, and acquisition would be followed. (See **Appendix L – Lands**)

Lands identified for retention and disposal are displayed on **Map 41**. Approximately 298,408 acres would be in the retention category. These are lands that would generally not be subject to land ownership adjustments. High priority lands for retention and potential future acquisition by the BLM would include those in and immediately adjacent to special designation areas (ACECs, WSRs, WSAs, National Trail Corridors, SRMAs, and recreation sites) as well as habitat for priority and special status species. The goal of potential acquisitions in these areas would be to enhance the following attributes: resource values identified for the area, public access to and within the area, recreation opportunities that are compatible with the specific area, manageability of the area or sites, and wildlife habitat. Land acquisitions in these areas would be considered to be consistent with this RMP and therefore plan amendments would not be required.

Approximately 8,901 acres of land would be identified as available for disposal. These lands would be available for exchange or sale, subject to the criteria described in **Appendix L – Lands**. Legal descriptions of these parcels are located in **Appendix L – Lands**. Lands leased or conveyed under the Recreation and Public Purposes Act, would be classified for such disposal under Sec 7 of the Taylor Grazing Act (42 USC 315f) and 43 CFR 2400.

Right-of-way holders would be issued perpetual easements for their facilities prior to the disposal of any BLM parcels.

# ACCESS

## Management Common to All Alternatives

For the purposes of this section, access refers to the physical ability and legal right of the public, agency personnel, and authorized users to reach public land. BLM would acquire legal public access and administrative access to BLM land from willing landowners. Methods of accomplishing this would be through fee purchase, exchange, donation, and/or long-term land use agreements. Easement acquisition would be the predominant method of obtaining legal access. If necessary, when BLM parcels are patented in land ownership adjustments, existing access could be retained using appropriate patent reservations. Methods of accomplishing this would be through fee purchase, exchange, donation, reciprocal rights-of-way, and/or long-term land use agreements.

## Alternative A – No Action

Access would continue to be sought based on planning guidance provided by the Headwaters RMP/EIS as supplemented by the State Director Guidance on Access (USDI-BLM 1989a). Legal public or administrative access would be obtained from willing landowners on a case-by-case basis as the need or opportunity arises using the criteria in the State Director's guidance. (See **Appendix L – Lands**)

In accordance with guidance in this latter document, the BFO would focus its access acquisition efforts on:

- Larger blocks of BLM-administered land which are designated for retention in BLM ownership.
- Areas with important resource values.
- Areas where public demand for access is high.
- Areas with substantial BLM investments.

## Management Common to Action Alternatives (B, C, and D)

BLM would follow specific access criteria outlined in **Appendix L – Lands** for obtaining new access and managing existing access to BLM administered lands. Acquisition efforts would be focused on those routes designated as "open" in the travel plan that lack legal public access.

## UNAUTHORIZED LAND USE

### Management Common to All Alternatives

BLM would abate realty-related unauthorized use through prevention, detection, and resolution. Unauthorized use of BLM administered land would be resolved through termination, short or long-term authorization, sale, or exchange as appropriate. Resolution of trespasses would require settlement of trespass liabilities and reclamation of any resource damage.

Resolution of trespasses would be conducted in accordance with 43 CFR 9230.

## ENERGY AND MINERALS

**Goal 1 –** Ensure that federal minerals are available for energy and mineral exploration and development.

**Goal 2** – Manage exploration and development of mineral resources and ensure they are conducted in an environmentally sound manner.

**Goal 3** – Where possible, conserve significant or unique geological features.

### Management Common to All Alternatives

The BLM Energy and Non-Energy Mineral Policy, which references several existing acts, recognizes the nation's need for domestic sources of minerals, energy, and other resources and the responsibilities concerning the discovery, development, production and acquisition of minerals and metals. All Energy and Minerals exploration, development, and production activities would be managed to prevent unnecessary or undue degradation.

### Alternative A – No Action

Mineral operations permits would identify requirements and BMP's necessary to avoid or minimize adverse effects on natural resources.

### Management Common to Action Alternatives (B, C, and D)

For all exploration and mining proposals BLM would ensure operations take all practical measures to maintain, protect, or minimize disturbances to resources.

Mineral activity would be managed to meet, or move toward meeting, Land Health Standards.

Future changes to ESA listings of species or occupied habitats may require changes or modifications of proposed activities to comply with the requirements of the act.

### Alternative B – Preferred Alternative

Where no alternative to road construction exists, roads (including roads in riparian areas) would be kept to the minimum necessary for the approved mineral activity. Roads and facilities would be closed and the landscape rehabilitated when no longer required for mineral or land management activities.

### Alternative C

No new or existing mineral operations (salable, leasable, and locatable) would be allowed to construct new structures, support facilities, or roads inside Riparian Management Zones.

### Alternative D

New and existing mineral operations (salable, leasable, and locatable) would be allowed to construct structures, support facilities, and roads within riparian areas using stipulations and BMPs when necessary. Roads and facilities no longer required for mineral or land management activities would be reclaimed to the best extent possible.

## LEASABLE SOLID MINERALS

### Management Common to All Alternatives

BLM would consider proposals for developing leasable minerals (coal, phosphate, sodium, potash, sulphur, oil shale, native asphalt, and solid and semi-solid bituminous rock) under the administration of the federal government on a case by case basis. Site specific environmental analysis would be required to lease these minerals.

## LEASABLE FLUID MINERALS

### Management Common to All Alternatives

#### *Oil and Gas*

Federal oil and gas leasing authority for public lands is found in the Mineral Leasing Act of 1920, as amended; and for acquired lands in the Acquired Lands Leasing Act of 1947, as amended. Leasing of federal oil and gas is affected by other acts such as the National Environmental Policy Act of 1969, the National Historic Preservation Act of 1966, FLPMA (1976), the Wilderness Act of 1964, the Endangered Species Act of 1973, as amended, and the Federal Onshore Oil and Gas leasing Reform Act of 1987. Regulations and other guidance governing federal oil and gas leasing and lease operations are contained in 43 CFR Group 3100, Onshore Operating Orders, Notices to Lessees, and BLM handbooks, manuals and instruction memorandums. Regulations governing geophysical exploration are found at 43 CFR 3150.

An oil and gas lease grants the lessee the right to explore for, extract, remove, and dispose of oil and gas deposits that may be found on the leased lands. The lessee may exercise the rights conveyed by the lease, subject to lease terms and any lease stipulations (modifications of the lease), and permit approval requirements.

The terms of existing oil and gas leases cannot be changed by the decisions in this document. When the lease expires, the area would be managed for oil and gas according to the decisions reached in this document.

The BLM planning process determines availability of federal mineral estate lands for oil and gas leasing (**Table 2-20**). For federal oil and gas where the surface is managed by another federal agency, the BLM would consult with that agency before issuing leases. In areas where oil and gas development may conflict with other resources, the areas may be closed to leasing in accordance with decisions made from this document. Regulations at part 43 CFR 3100.0-3(d); the Secretary's general authority to prevent the waste and dissipation of public property; and the Attorney General's Opinion of April 2, 1941 (Vol. 40 Op. Atty. Gen 41) allow the BLM to lease lands that are otherwise unavailable for leasing if oil and gas is being drained from such lands. If the unavailable lands were under the jurisdiction of another agency, leasing of such lands would only occur following consultation, and consent if necessary, from the surface managing agency.

Unavailable lands for this RMP (**Table 2-20**) would be leased only if a state or fee well is proposed or completed within the same spacing unit, or if the lands are within a producing unit. These lands would be leased with a no surface occupancy and no subsurface occupancy stipulation with no waiver, modification or exception provisions. There would only be a paper transaction with no physical impacts on the unavailable lands. There would be no exploration or development (drilling or production) within the unavailable lands. After issuance of a lease, the lease would be committed to a communitization agreement and the United States would then receive revenue in proportion to its acreage interest as it bears to the entire acreage interest committed to the agreements.

Areas where oil and gas development could coexist with other resource uses would be open to leasing under standard lease terms or with added stipulations. Stipulations are a part of the lease only when environmental and planning records show the need for them. Three types of stipulations describe how lease rights are modified: no surface occupancy, timing limitation (seasonal restriction), and controlled surface use. (For descriptions, see "Leasing Process" in the "Oil and Gas" section of **Appendix M – Fluid Minerals**) Stipulations may be changed by application of waivers, exceptions, or modifications. The decision whether to grant waivers, exceptions, or modifications generally occurs during the Application for Permit to Drill approval process. If the authorized officer determines the change to be substantial, the preferred alternative would be subject to a 30-day public review period. Waivers are a permanent exemption from a lease stipulation. This occurs when the resource does not require the protection of stipulation. Exceptions are granted on a case-by-case basis. Each time the lessee applies for an exception, the resource objective of the stipulation must be met. Modifications are fundamental changes to the provisions of a lease stipulation either temporarily or for the term of the lease.

**Table 2-20**
**Acres of Federal Mineral Estate Available or Not for Fluid Mineral Leasing**

| | Alternative A | Alternative B | Alternative C | Alternative D |
|---|---|---|---|---|
| **Acres Available for Oil and Gas Leasing[1]** | **597,384** | **623,420** | **71,812** | **615,788** |
| No Surface Occupancy | 251,779 | 280,312 | 23,903 | 93,288 |
| Timing Limitations | 285,993 | 286,800 | 0 | 436,410 |
| Controlled Surface Use | 27,701 | 38,365 | 30,893 | 32,011 |
| Standard Lease Terms | 31,911 | 17,943 | 17,016 | 54,079 |
| **Acres Unavailable for Oil and Gas Leasing** | **54,810** | **28,774** | **580,382** | **36,406** |
| Non-discretionary | 28,774 | 28,774 | 28,774 | 28,774 |
| Discretionary | 26,036 | 0 | 551,608 | 7,632 |

[1]- Acreages by subcategory were calculated such that each column of subcategories under each alternative adds up to the total available acres for leasing based on the following general concepts where multiple stipulations overlapped: No Surface Occupancy stipulations override and are more restrictive than Timing Limitations, Controlled Surface Use, and Standard Lease Terms. Timing Limitation stipulations override and are more restrictive than Controlled Surface Use and Standard Lease Terms. Controlled Surface Use stipulations override and are more restrictive than Standard Lease Terms. Non-overlapping individual stipulation-specific acreages are displayed by alternative in Chapter 4 in Tables 4-23, 4-27, 4-30, and 4-33.

On Bureau of Reclamation lands, in addition to the resource specific stipulations under each alternative (e.g., wildlife, recreation); stipulations that are recommended by the Bureau of Reclamation would be used (see Oil and Gas section in **Appendix M – Fluid Minerals**).

Additional information can be provided to the lessee in the form of a lease notice. This notice does not place restrictions on lease operation, but does provide information about applicable laws and regulations, and the requirements for additional information to be supplied by the lessee.

New information may lead to changes in existing resource inventories. New use areas and resource locations may be identified or use areas and resource locations that are no longer valid may be identified. These resources usually cover small areas requiring the same protection or mitigation as identified in this plan. Identification of new areas or removal of old areas that no longer have those resource values would result in the use of the same lease stipulation identified in this plan. These areas would be added to the existing data inventory without a plan amendment. In cases where the changes constitute a change in resource allocation outside the scope of this plan, a plan amendment would be required.

After lease issuance, the lessee may conduct lease operations with an approved permit. Proposed drilling and associated activities must be approved before beginning operations. The operator must file an Application for Permit to Drill or Sundry Notice that must be approved according to (1) lease stipulations, (2) Onshore Oil and Gas Order, and (3) regulations and laws. (See "Permitting" in the "Oil and Gas" section of **Appendix M – Fluid Minerals**)

Development of coal bed natural gas in and around Bozeman Pass in Gallatin County would be constrained by the zoning regulations developed for the Bozeman Pass Zoning District recently established by Gallatin County. These regulations established coal bed natural gas development as a "Natural Resources Conditional Use." These uses are allowed upon obtaining a Natural Resource Conditional Use Permit through the county as described in the zoning district regulations.

None of the lands within the Sheep Creek, Black Sage, Sleeping Giant, Elkhorns Tack-on, Humbug Spires, or Yellowstone Island Wilderness Study Areas would be available for oil and gas leasing under any of the alternatives unless they are released from their existing status, at which point they would be managed under the terms and conditions of the selected alternative identified from this RMP.

### *Geothermal*

Lands in the Planning Area would be available for geothermal leasing, unless located within wilderness or WSAs or in instances where it is determined that issuing the lease would cause unnecessary or undue degradation to public lands or resources. There are Known Geothermal Resource Areas in the Planning Area at Boulder Hot Springs, Corwin Springs, and Marysville. A site-specific environmental analysis would be prepared should interest be expressed in exploring for or developing geothermal resources in the Planning Area. This analysis would address the application of stipulations and develop any additional mitigating measures over and above the lease stipulations required.

Stipulations developed in this document for oil and gas leases would be applied to any geothermal lease issued if appropriate. Geothermal exploration and production activity is sufficiently different from oil and gas that the stipulations developed for oil and gas may not be appropriate and could be modified.

### *Geophysical Exploration*

Oil and gas geophysical activity which is administered by the BLM is governed by regulations found at 43 CFR Subparts 3150, 3151, and 3154. Additional guidance is found in BLM Manual Section 3150 and Handbook 3150. For additional information on geophysical operations and the BLM's procedures and regulations see the "Geophysical Operations" portion of the oil and gas section of the **Appendix M – Fluid Minerals**.

The BLM would review Notices of Intent to Conduct Geophysical Exploration in the Planning Area and develop appropriate mitigation measures so as not to create undue and unnecessary degradation. A site-specific environmental analysis would be prepared for each NOI filed.

## Alternative A – No Action

Under the continuation of current management, approximately eight percent (54,810 acres) of BLM subsurface ownership administered by the BFO would not be available for oil and gas leasing (**Table 2-20**). This includes the Sleeping Giant, Sheep Creek, Elkhorns Tack-on, Black Sage, Humbug Spires, and Yellowstone Island WSAs. Other areas unavailable for oil and gas leasing in this alternative include core areas of state wildlife management areas.

The remainder of federal mineral estate lands would be available for leasing, subject to the stipulations specified in **Table 2-21, Appendix M – Fluid Minerals,** or under Standard Lease Terms. **Map 42** depicts lands available and unavailable for leasing under Alternative A.

## Alternative B – Preferred Alternative

Approximately four percent (approximately 28,774 acres) of BLM-administered federal mineral estate lands in the Planning Area would not be available for oil and gas leasing (**Table 2-20**). This includes the Sleeping Giant, Sheep Creek, Elkhorns Tack-on, Black Sage, Humbug Spires, and Yellowstone Island Wilderness Study Areas. The remainder of federal mineral estate

lands in the Planning Area would be available for leasing, subject to the stipulations specified in **Table 2-21, Appendix M – Fluid Minerals,** or to Standard Lease Terms. **Map 43** depicts lands available and unavailable under Alternative B.

The timing limitation applied to sage grouse breeding habitats would be based on a three mile buffer for the BFO area rather than a more generally accepted two mile buffer. Radio telemetry studies in southwest Montana indicate that some populations of sage grouse are migratory and move considerable distances during their annual life cycle, including during their nesting season.

In addition, habitat in the Planning Area is unevenly distributed. Based on the most current research examined in the Western Association of Fish and Wildlife Agencies' guidelines (Connelly et al. 2000), a five kilometer buffer is recommended for unevenly distributed habitats (thus the three miles for the BFO). The timing restriction applies to potentially suitable sage grouse habitat (sagebrush areas with adequate sage cover for nesting); therefore, not all acres within the three-mile buffer would be affected by the stipulation. Timeframes for the timing limitation have also been adjusted to limit use from March 1 through June 30 rather than March 15 through June 15. This is because higher elevations in the southwest part of Montana (in comparison to eastern Montana) result in later use of breeding and nesting areas in certain portions of the Planning Area, while information from radio telemetry studies show use of low elevation leks as early as March 1.

## Alternative C

Under Alternative C, approximately 89 percent (580,382 acres) of BLM subsurface ownership administered by the BFO would not be available for oil and gas leasing (**Table 2-20**). This includes the WSAs identified in Alternative B, plus lands in these additional locations:

- Prairie Dog Towns
- Sage Grouse Winter/Spring Range
- Lands within 0.5 mile of Sage Grouse Strutting Grounds (leks)
- State Wildlife Management Areas
- Big Game Winter/Spring Range
- Elk Calving/Big Game Birthing Areas
- Lands within 1 mile of Bald Eagle Nesting/Breeding areas
- Lands within 0.5 mile of Raptor Breeding Areas
- Lands within 1 mile of peregrine falcon breeding territories
- Lands within 0.5 mile of ferruginous hawk breeding territories
- Lands within 1 mile of 99 to 100 percent pure westslope cutthroat trout habitats
- Yellowstone Cutthroat Habitat
- Municipal Watersheds
- Lands recently acquired with LWCF funds.

The remainder of mineral estate in the Planning Area would be available for leasing, subject to the stipulations specified in **Table 2-21, Appendix M – Fluid Minerals** or to Standard Lease Terms. **Map 44** depicts lands available and unavailable under Alternative C.

## Alternative D

Under Alternative D, approximately six percent (36,406 acres) of BLM subsurface ownership administered by the BFO would not be available for oil and gas leasing, including the WSAs (**Table 2-20**) and lands recently acquired with LWCF funds. The remainder of mineral estate in the Decision Area would be available for leasing, subject to the stipulations specified in **Table 2-21**, **Appendix M – Fluid Minerals** or to Standard Lease Terms. **Map 45** depicts lands available and unavailable under Alternative D.

**Table 2-21**
**Lease Terms and Stipulations by Alternative**

**Key**
TL Timing Limitation Stipulation
CSU Controlled Surface Use Stipulation
SLT Standard Lease Terms
NSO No Surface Occupancy Stipulation
NL No Lease
NA Not Applicable
Distances are enumerated and those equal or greater than 100 are feet and those 3 or less are miles. Time periods are month/day.

| Resource | Alt A | Alt B | Alt C | Alt D |
|---|---|---|---|---|
| **Wildlife** | | | | |
| Grizzly Bear – Recovery Zone | CSU | NSO | NSO | CSU |
| Grizzly Bear – Denning Habitat (Distribution Zone) | CSU | TL 4/1-6/30, 9/15-10/15 | NSO | CSU |
| Gray Wolf Dens – Former NW MT Recovery Area | CSU | TL 4/15-6/30 1 | NSO 1 | CSU |
| Prairie Dog Towns | NSO ¼ | NSO | NL | NSO |
| Sage Grouse Winter/Spring Range | TL 3/1-6/30 | TL 12/1-5/15 | NL | TL 12/1-5/15 |
| Sage Grouse Strutting Grounds (leks) | NSO 500 | NSO ¼ | NL ½ | NSO ¼ |
| Sage Grouse Breeding Habitat | TL 3/1-6/30 ¼ | TL 3/1-6/30 3 | NSO 3 | TL 3/1-6/30 3 |
| Wildlife Management Areas | NL/NSO | NSO | NL | NSO |
| Big Game Winter/Spring Range | TL 12/1-5/15 | TL 12/1-5/15 | NL | TL 12/1-5/15 |
| Elk Calving/Big Game Birthing Areas | TL 5/1-6/30 | TL 4/1-6/30 | NL | SLT |
| Bighorn Sheep Yearlong Range | TL 12/1-5/15 | TL 11/1-6/30 | NL | TL 11/1-6/30 |
| Bighorn Sheep Core Areas | TL 12/1-5/15 | NSO | NL | SLT |
| Bald Eagle Nest Sites/Breeding Habitat | NSO ½ + TL 2/1-8/31 1 | NSO ½ + TL 2/1-8/31 1 | NL 1 | NSO ½ + TL 2/1-8/31 1 |
| Raptor Breeding Territories (Golden eagle, Prairie falcon, Swainson's Hawk) | NSO ¼ | TL 3/1-7/31 ½ | NL ½ | SLT |
| Peregrine Falcon Nest Sites/Breeding Habitat | NSO ¼ | NSO 1 | NL 1 | NSO 1 |
| Ferruginous Hawk Breeding Territories | NSO ¼ | NSO ½ | NL ½ + TL 3/1-8/31 1 | TL 3/1-7/31 ½ |
| Threatened and Endangered Species | CSU | CSU | CSU | CSU |
| **Fisheries** | | | | |
| Westslope Cutthroat Trout Habitat (90-99% pure) | NSO ¼ | NSO ½ | NSO ½ | CSU ½ |
| Westslope Cutthroat Trout Habitat (99-100% pure) | NSO ¼ | NSO ½ | NL ½ | NSO ½ |
| Fluvial/Adfluvial Arctic Grayling Habitat | NSO ¼ | NSO ½ | NSO ½ | CSU ½ |
| Bull Trout Habitat | CSU ½ | NSO ½ | NSO 1 | NSO ½ |
| Yellowstone Cutthroat Trout Habitat (90-100% pure) | NSO ¼ | NSO ½ | NL ½ | CSU ½ |
| Streams with High Restoration Potential – Native Fish | NA | NSO ½ | NA | NA |
| Class 1 Fisheries (Blue Ribbon) | NSO 1000 | NSO ½ | NSO 1 | CSU ½ |
| **Recreation** | | | | |
| Developed Sites | NSO 300 | NSO ¼ | NSO ½ | CSU ¼ |
| Special Recreation Management Areas | SLT | CSU | NSO | SLT |
| **Cultural and Paleontological Resources** | | | | |
| Cultural and Paleontological Resources Inventory Requirement | CSU | CSU | CSU | CSU |
| National Register of Historic Places Eligible Properties/Districts and Paleontological Localities | NSO 300 | NSO 300 | NSO 300 | NSO 300 |
| Traditional Cultural Properties | SLT | NSO ½ | NSO ½ | NSO ½ |
| **Visual Resources** | | | | |
| VRM Class II, III & IV Areas | CSU | CSU | CSU | SLT |
| Vegetation, Wetlands, Riparian and Water Quality | | | | |

**Table 2-21**
**Lease Terms and Stipulations by Alternative**

**Key**
TL Timing Limitation Stipulation
CSU Controlled Surface Use Stipulation
SLT Standard Lease Terms
NSO No Surface Occupancy Stipulation
NL No Lease
NA Not Applicable
Distances are enumerated and those equal or greater than 100 are feet and those 3 or less are miles. Time periods are month/day.

| Resource | Alt A | Alt B | Alt C | Alt D |
|---|---|---|---|---|
| Wetlands, Floodplains and Riparian Areas | NSO 500, 1000 | NSO | NSO | NSO |
| Special Status Plant Habitats | CSU | CSU | CSU | CSU |
| Known or Discovered Special Status Plants or Populations | NSO ¼ | NSO ¼ | NSO ½ | NSO |
| Municipal Watersheds | SLT | NSO | NL | CSU |
| **Soils** | | | | |
| Areas of mass wasting, unstable land areas, slopes >20 percent on Boulder Batholith Soils or >30 percent on non-Boulder Batholith Soils | CSU | CSU | CSU | SLT |
| **Trails, Rivers and Special Designations** | | | | |
| Continental Divide National Scenic Trail (Marysville) | NSO 300 | NSO ½ | NSO ½ | SLT |
| Lewis & Clark National Historic Trail | SLT | NSO ½ | NSO 1 | SLT |
| Rivers Suitable for WSR Designation | NSO 1000 | NSO ½ | NSO 1 | NA |
| **Lands & Realty** | | | | |
| Lands Acquired with Land and Water Conservation Funds | NA | NSO | NA | NA |
| R&PPs and 2920 Authorizations | SLT | NSO | NSO | NSO |

# LOCATABLE MINERALS

## Management Common to All Alternatives

The BLM recognizes that public lands are an important source of the Nation's energy and non-energy mineral resources. The BLM is responsible for making public lands available for orderly and efficient development of these resources under principles of Multiple Use Management, and the concept of Sustainable Development.

BLM would provide opportunities for mineral exploration and development.

BLM would ensure accessibility to mineralized areas for exploration and development.

No casual use areas of concern or suction dredge use areas would be identified or designated.

BLM would strive to provide for timely permit evaluation and processing of federal energy and solid mineral exploration and development proposals.

A Plan of Operations would always be required (instead of a Notice) when there are lands or waters known to contain federally proposed or listed threatened or endangered species or their proposed or designated critical habitat, unless BLM allows for other action under a formal land-use plan or threatened or endangered species recovery plan. Land tracts where resource values (i.e., sensitive status or priority species, visual corridors, adjacent land restrictions, substantial cultural resource sites and fossil localities, etc.) may require special measures to prevent unnecessary or undue degradation during mineral exploration (and geophysical exploration) and development would be identified.

BLM would develop and implement measures to prevent unnecessary and undue degradation from exploration, mining, and reclamation activities. BLM would also develop conditions of approval and implementation guidelines (BMPs) to minimize impacts to natural resources including significant cultural resource sites and fossil localities caused by locatable mineral development.

Reclamation and restoration activities would be monitored to determine effectiveness of the practices.

For locatable minerals, placer mining operations, reclamation activities would be required to restore the stream channel and riparian habitat to functioning condition as close to pre-mining conditions as possible.

As information becomes available, known areas of geological hazards (for example landslide prone areas, avalanche areas, rock fall areas and unstable ground) would be mapped.

A total of approximately 6,300 acres of land are withdrawn from locatable mineral entry (with some exceptions primarily for Public Water Reserves described in Chapter 3). These lands would remain withdrawn under all alternatives.

The Devil's Elbow and Holter Lake recreation areas totaling 171 acres located on Hauser Lake would continue to be withdrawn due to their high level of visitation, development, and exclusive use for concentrated recreation activities. These recreation areas include four developed sites (Devil's Elbow, Clark's Bay, Two Camps Vista, and Holter Lake).

The Ringing Rocks area totaling 160 acres would continue to be withdrawn from mineral entry in order to protect this unique geological feature.

Approximately 5,700 acres of land acquired with Land and Water Conservation Funds since development of the Headwaters RMP and Dillon Management Framework Plan would not be opened to locatable mineral entry.

## Alternative A – No Action

No additional areas would be proposed for mineral withdrawal.

Locatable minerals would be managed as described under "Management Common to All Alternatives."

## Alternative B

Locatable minerals would be managed as described under "Management Common to All Alternatives" and "Management Common to Action Alternatives" under Energy and Minerals.

Under Alternative B, in addition to the approximately 6,300 acres previously described as withdrawn under "Management Common to All Alternatives", approximately 198 acres would be proposed for withdrawal from mineral entry. These acres would be in highly visited and developed recreation sites that are exclusively used and constitute substantial financial investments by BLM (**Table 2-22, Map 46**).

**Table 2-22**
**Recreation Areas Proposed For Withdrawal From Mineral Entry Under Alternatives B and C**

| Site Name | Approximate Acres |
|---|---|
| Departure Point | 5 |
| Divide Bridge | 8 |
| Divide Campground | 17 |
| French Bar | 44 |
| Holter Dam | 13 |
| Log Gulch | 39 |
| Spokane Bay | 8 |
| White Sandy | 64 |
| **Total Acres** | **198** |

## Alternative C

Locatable minerals would be managed as described under "Management Common to All Alternatives" and "Management Common to Action Alternatives" under Energy and Minerals.

Under Alternative C, in addition to the 6,300 acres previously described as withdrawn under "Management Common to All Alternatives", and the 198 acres in recreation sites proposed for withdrawal under Alternative B (**Table 2-22**), approximately 180 acres of riparian areas in Muskrat Creek and Nursery Creek would also be proposed for withdrawal from mineral entry (**Map 46**). Under Alternative C an additional total of 378 acres would be proposed for mineral withdrawal compared to the existing withdrawal acreage.

The Muskrat/Nursery Creek proposed withdrawal is intended to protect habitat for a genetically pure westslope cutthroat trout population (sensitive species) that has undergone a successful interagency restoration project over the past 10 years. Funding and labor from the USDA Forest Service, BLM, MFWP, Montana State University, and Trout Unlimited have successfully eradicated non-native brook trout from Muskrat Creek, thus creating a currently thriving genetically pure westslope cutthroat trout population. Muskrat Creek has importance to westslope cutthroat trout restoration beyond the local level because after the ten year, $50,000 restoration effort, its population is now used as a donor source to reestablish westslope cutthroat trout in a number of different locations in the State of Montana. Montana Fish, Wildlife and Parks has identified Muskrat Creek as having the most secure and strongest population of westslope cutthroat trout in the entire Elkhorn Mountain range (Lee Nelson, MFWP Fisheries Biologist, personal communication 2006).

Westslope cutthroat trout have declined in abundance, distribution, and genetic diversity throughout their native range. In the Missouri River drainage of Montana genetically pure westslope cutthroat trout are estimated to persist in less than 5 percent of the habitat they once occupied. To prevent listing under the Endangered Species Act, federal and state managers need to ensure conservation of local populations, preservation of genetic diversity and work towards the long-term, self-sustaining persistence of westslope cutthroat trout (MFWP 1999b).

The 180 acres proposed for the Muskrat/Nursery Creek withdrawal would provide the minimum amount of protection to water quality, stream morphology, and riparian function to protect the restored and unique population of westslope cutthroat trout. This withdrawal would protect the genetically pure westslope cutthroat trout population in Muskrat Creek by preventing loss of riparian vegetation, streambed and bank destabilization, erosion and sedimentation, loss of floodplain vegetation, alteration of floodplain morphology, and alteration of

stream channel morphology that could occur in association with locatable mineral activity, particularly placer mining. Another key impact that placer mining (including casual use) could have on westslope cutthroat trout, is excavation, crushing or disturbance of streambed gravels during the critical period when trout are spawning and eggs are incubating/hatching (June 15 through August 31). If mining operations cause a decline in the population, the population could no longer be able to function as a donor source for Montana and impede restoration efforts.

Muskrat and Nursery Creek are located in the southern Elkhorn WSA which was evaluated in the joint Bureau of Mines and USGS report Mineral Summary Bureau of Land Management Wilderness Study Areas in Montana (1990). In the Muskrat and Nursery Creek areas the report concluded that there is high resource potential for copper, molybdenum and tungsten with a certainty level of D (available information clearly defines the level of mineral resource potential, the highest level of confidence), as well as a moderate mineral resource potential for uranium and thorium with a certainty level of C (Available information gives a good indication of the level of resource potential, US DOI Bureau of Mines and USGS, 1990).

No potential for placer mining has been identified in either Muskrat or Nursery Creek; therefore there is a very low probability of any proposals being submitted to the BLM. In the absence of a mineral withdrawal, should a miner propose to conduct placer mining in these drainages, timing stipulations could be attached to the permit to protect critical periods of spawning and incubation/hatching. Should lode mining be proposed for any of resources identified in the Bureau of Mines report mining practices, BMPs, reclamation/rehabilitation techniques, and bonding would be applied. If unavoidable impacts were to occur they would be mitigated through restoration at the conclusion of mining to the extent practicable. In spite of these measures, minerals operations that substantially reduce the size of the westslope cutthroat trout population and/or have long-term substantial adverse effects on aquatic habitat could eliminate the ability to use this fish population as a donor source to re-establish other populations.

## Alternative D

A total of approximately 6,300 acres would remain withdrawn from mineral entry. Many acres of BLM administered lands along the Missouri River Chain of lakes are included in Power Site Reserve and Power Project withdrawals. Many of these lands are adjacent to existing reservoirs and power projects. No additional areas would be proposed for mineral withdrawal.

Locatable minerals would be managed as described under "Management Common to All Alternatives" and as described under "Management Common to Action Alternatives" under Energy and Minerals.

# SALABLE MINERALS

## Management Common to All Alternatives

BLM would dispose of salable minerals on unpatented mining claims only for a public purpose when no reasonable alternative exists. Salable mineral sites would have an approved mining and reclamation plan and an environmental analysis prior to being opened. Mineral material would be sold at a fair market value to the public, but would be free to state, county, or other local governments when used for public projects. Mineral material sales would be processed on a case-by-case basis.

## Alternative A – No Action

The BLM would authorize the purchase of salable minerals (common varieties of sand, stone, gravel, pumice, cinders, clay, and petrified wood) from the federal government through a contract of sale (by the ton or cubic yard) or a free-use permit unless specific circumstances dictate otherwise. Extraction of materials from previously disturbed sites would be encouraged and all impacts to natural resources would be minimized.

## Alternative B – Preferred Alternative

The BLM would continue to authorize the purchase of salable minerals (common varieties of sand, stone, gravel, pumice, cinders, clay, and petrified wood) from the federal government through a contract of sale (by the ton or cubic yard) or a free-use permit unless specific circumstances dictate otherwise. Extraction of materials from previously disturbed sites would be encouraged. All development and operating impacts to natural resources and local residence would be minimized.

## Alternative C

The BLM would not allow the purchase of salable minerals (common varieties of sand, stone, gravel, pumice, cinders, clay and petrified wood), unless desired by the state or counties, or within existing community pits.

## Alternative D

The BLM would authorize the purchase of salable minerals (common varieties of sand, stone, gravel, pumice, cinders, clay, and petrified wood) from the federal government through a contract of sale (by the ton or cubic yard) or a free-use permit unless specific circumstances dictate otherwise.

# ABANDONED MINE LANDS

**Goal 1 –** Reclaim AML sites on public land to improve water quality, plant communities, and diverse fish and wildlife habitat.

**Goal 2** – Reduce and/or eliminate risks to human health from hazardous mine openings.

**Goal 3** – Protect historic resources and wildlife habitat commonly associated with AML sites.

## Management Common to All Alternatives

To the extent possible on BLM lands, BLM would strive to meet state and federal water quality standards in watersheds impacted by historic mining.

BLM would assess level of risks at AML sites and prioritize for reclamation based on standardized risk assessment. Reclamation would be implemented at the highest risk sites first.

Where deemed appropriate by BLM personnel, BLM would restore severely impacted soils and watersheds as close as possible to pre-disturbed conditions that support productive plant communities and ensure properly functioning watersheds.

Closures of dangerous inactive and abandoned mine sites would be designed to reduce the risks to human health and safety, restore the environment, and protect geological and cultural resources and meet or move toward meeting Land Health Standards.

Restoration and reclamation activities and repositories would be monitored to determine effectiveness of reclamation practices.

Operation, maintenance, and evaluation activities would be conducted in a manner to ensure the effectiveness of the selected remediation.

To the extent possible on BLM lands, BLM would strive to meet state and federal air quality standards in the interest of protecting human health potentially impacted by fugitive dust emissions.

All resource activities would be required to reclaim and restore AML or hazard reduction sites to the extent necessary to protect work performed on the site.

# HAZARDOUS MATERIALS MANAGEMENT

**Goal 1** – Minimize threats and reduce risks to the public and environment from hazardous materials.

## Management Common to All Alternatives

BLM would comply with all appropriate laws and regulations regarding hazardous materials. Disposal of hazardous materials on public lands would not be permitted. When the use or storage of hazardous materials is authorized (i.e. in mining operations or other types of commercial activities) special stipulations would be applied to comply with appropriate laws, regulations, and policies. In the event of hazardous materials incidents on public land, standard operating procedures would be used to respond. Cleanups and reclamation would be conducted in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan and the NEPA decision.

BLM would promote and support the appropriate use and recycling of hazardous materials in public facilities and on public land to prevent or minimize the generation and disposal of hazardous wastes.

BLM would minimize and remediate hazardous materials spills or incidents.

Environmental Site Assessments would be conducted for land acquisitions, land disposals, and for right-of-ways if applicable. Land uses would be authorized and managed to reduce the occurrence and severity of hazardous materials incidences on public land.

BLM would assess level of risk at hazard sites and conduct remediation at highest priority sites that are the greatest risks to the public and environment.

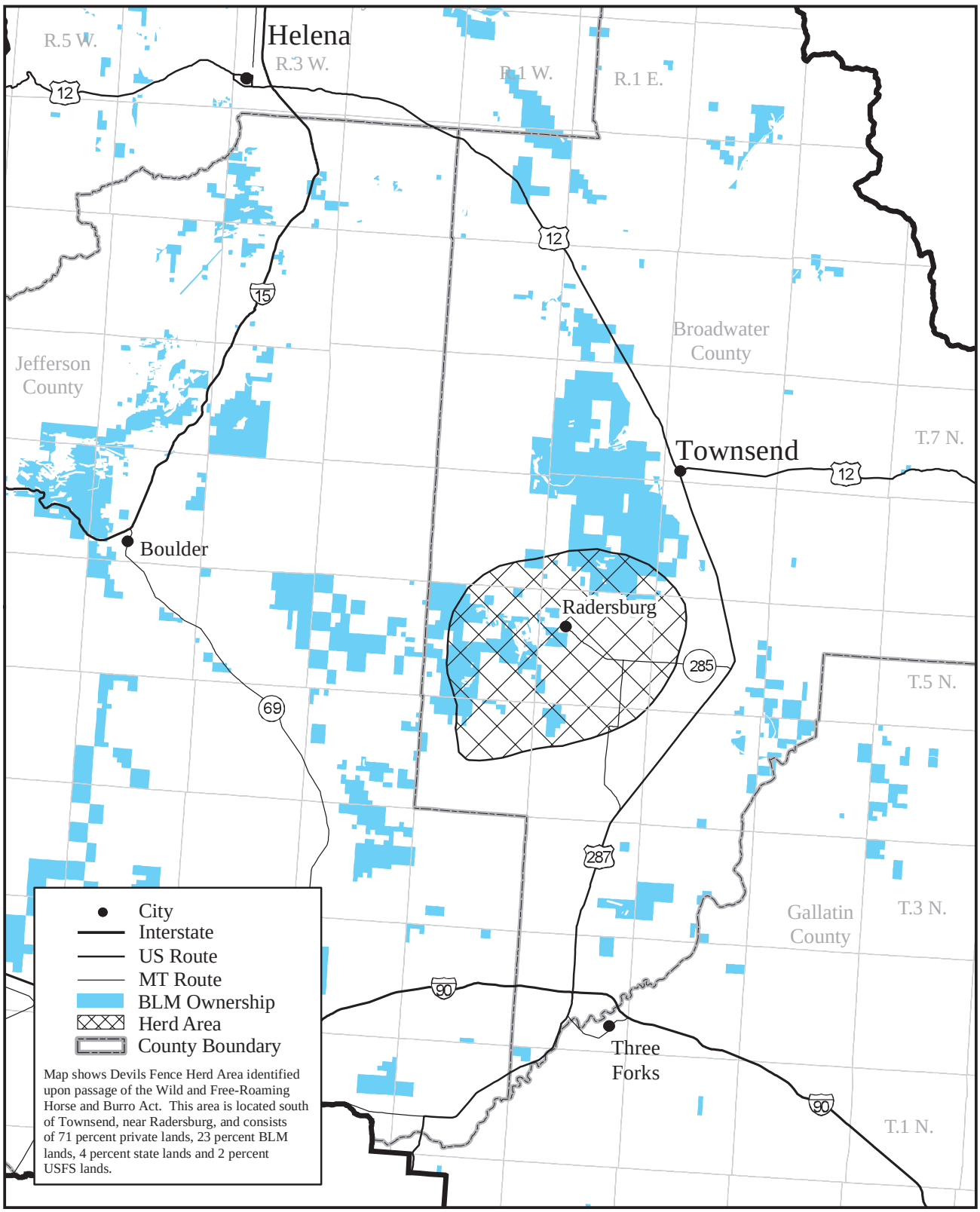
Pollutants, such as flammable liquids and lubricants, would be prevented from entering streams by storing outside of riparian areas, having a spill prevention and control plan, and not allowing refueling within riparian areas (with the exception of permitted mining activities, fire suppression activities, reclamation work and chainsaw re-fueling).

# WILD HORSES AND BURROS

## Management Common to All Alternatives

Herd areas are public lands identified as being habitat used by wild horses and burros at the time of passage of the Wild and Free-Roaming Horse and Burro Act. At the time of the passage of the Act, a Wild Horse Herd Area called the Devils Fence Herd Area was designated. This herd area is between Townsend and Radersburg (**Map 47**). The herd area is predominantly private and State of Montana lands intermingled with BLM and USFS lands dispersed in a fragmented manner throughout the area. Of the approximately 69,725 acres in the Devils Fence Herd Area, there are 49,592 acres of private lands (71 percent); 16,231 acres of BLM (23 percent); 2,868 acres of state land (4 percent); 1,032 acres of USFS land (2 percent), and 2 acres of local government land. Additionally, several fences partition this area among the many landowners which would further inhibit the free roaming nature of said horses. This area has not been used by, or managed to support wild horses since 1977 due to habitat limitations, and land ownership patterns. In 1977 the area was closed to wild horse use and twelve wild horses were gathered and removed in the Devils Fence area in compliance with the Act. Conditions have changed little since 1977 when this herd was eliminated.

Under the current situation as well as the foreseeable future, the Devils Fence Herd Area is not conducive for the long term maintenance and management of wild

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Map generated by the Butte Field Office in April 2008

Albers Equal Area, NAD83 Projection

This map is intended for display purposes. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data, or for purposes not intended by BLM. This map may not meet National Map Accuracy Standards. This product was developed through digital means and information may be updated without notification.

**Map 47: Devils Fence Herd Area**

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

**Butte Field Office**
**Proposed RMP/Final EIS**

horses that would result in healthy self-sustaining wild horses in a thriving natural ecological balance. In order to manage for wild horses in this area, private land owners would have to request that large portions of their private property be made available to the BLM, and private fences would have to be removed to allow animals to freely roam between land owners. Under all RMP alternatives the Devils Fence Herd Area would continue not to be managed for wild horse use, and therefore would not be designated herd management area (HMA) status.

## SOCIAL AND ECONOMIC ENVIRONMENT

**Goal 1 –** Provide opportunities for economic benefits while minimizing adverse impacts on resources and resource uses.

**Goal 2** – Provide for a diverse array of activities that result in social benefits for local residents, businesses, visitors, interested citizens, and future generations, while minimizing negative social effects.

**Goal 3** – Sustain, and where appropriate, restore the health of forest, rangeland, aquatic, and riparian ecosystems administered by the BLM to provide a sustained flow of economic benefits within the capability of the ecosystem.

**Goal 4** – Protect visual quality, wildlife habitats, and recreation opportunities to sustain non-market values.

**Goal 5** – Make resource commodities available to provide a sustainable flow of economic benefits within the capability of the ecosystem.

### Management Common to Action Alternatives (B, C, and D)

Identified Special Recreation Management Areas and the remaining Extensive Recreation Management Areas would be managed for identified user markets, activities, and experience levels.

Collaborative and/or stewardship processes would be used in the analysis and treatment of all resources and uses, as possible.

BLM would provide opportunities for traditional and nontraditional uses of forest and forest products by incorporating sound ecological principles while contributing to the economic stability of the community.

Use of new and developing technologies and industries would be encouraged in achieving healthy forest, stewardship, biomass utilization, and fuel management goals.

## ENVIRONMENTAL JUSTICE (EJ)

**Goal –** Identify and remediate to the extent possible disproportionate negative effects to minority or low income populations per Executive Order 12898 – "Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations". Evaluate and disclose whether actions have negative consequence on EJ populations and avoid where practical.

### Management Common to All Alternatives

Under all alternatives, BLM would evaluate and disclose whether actions would place a disproportionate share of negative environmental consequences on any particular populations covered by the Executive Order, and where practical, avoid such consequences.

## TRIBAL TREATY RIGHTS

**Goal –** Accommodate treaty and legal rights of Native American groups in management of public lands. Tribal treaties affecting the Decision Area are contained in **Appendix K – Cultural Resources**.

### Management Common to All Alternatives

BLM would notify and consult with tribes on BLM actions. Consultation and coordination would be conducted on a government to government basis with federally recognized tribes.

# ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

The following alternatives were considered but not analyzed in detail because they were outside of the technical or legal constraints of developing land use plans for public lands and resources.

## INCREASED MOTORIZED ACCESS

In the context of travel planning, an alternative was proposed to emphasize motorized recreation in the Scratchgravel Hills and Marysville areas beyond currently available motorized access. This alternative was not analyzed in detail because it did not meet the purpose and need for site-specific travel planning (to develop travel plans that meet the needs of public and administrative access, are financially affordable to maintain, and minimize user conflicts and natural resource impacts associated with roads and trails) and because it entailed promoting public use of a number of routes for which BLM currently lacks legal access through private lands for public use. Portions of this alternative were incorporated into Alternative D where BLM has legal access through private lands.

## CONSTRUCTION OF A CAMPGROUND AND MOTORIZED TRAILHEAD IN THE MARYSVILLE AREA

Construction of campgrounds and trailheads are generally activity plan decisions not regularly addressed at the RMP scale. Construction of these facilities could follow

in the future if they are found to be consistent and complementary to the travel plan and RMP decisions that will be made for the Marysville area with this RMP. Future decisions on whether to construct these facilities would consider the relative priority of these facilities compared to other facility construction and maintenance in the BFO.

### ADDITIONAL ACEC NOMINATIONS

Jerry Johnson Creek, City of Butte Big Hole River Diversion, Soap Gulch-Camp Creek, and High Ore Creek areas were nominated as ACECs. None of these areas were carried forward as potential ACECs because each failed to meet either relevance or importance criteria to qualify as potential ACECs (see **Appendix I – ACECs**).

During the public comment period for the Draft RMP/EIS, public comments were received suggesting ACEC expansions or new ACEC designations not previously received during public scoping, and therefore not considered in the Draft RMP/EIS. Due to the requirements for extended public review of new or expanded ACEC designations, the BLM suggested to commenters that these proposals be re-submitted after finalization of the Butte RMP and that they would be considered as potential RMP amendments in the future if deemed to meet criteria for ACECs.

### MORATORIUM ON LAND EXCHANGES

An alternative to place a moratorium on land exchanges was considered but eliminated from detailed study. Congress, through the passage of the Federal Land Policy and Management Act (43 U.S. C.1716), has determined that land exchanges are an appropriate land management tool to consolidate land ownership for more efficient management as long as individual exchanges are determined to be in the public interest and are done within regulatory constraints. **Appendix L – Lands** includes criteria that would be used in evaluating potential land parcels involved with land exchanges.

### REDUCED LIVESTOCK GRAZING

An alternative to substantially reduce the number of AUMs in some BLM grazing allotments (excluding allotments acquired through recent land acquisitions and exchanges) was considered as a means to minimize conflicts between livestock grazing and recreational users and wildlife. This alternative was not analyzed in detail because across all alternatives individual allotments would be assessed and managed through implementation of Standards for Rangeland Health and Guidelines for Livestock Grazing Management.

Adjustments to livestock management practices or livestock numbers, including increases or decreases, would be made in accordance with the results of rangeland health assessments, monitoring studies, and allotment evaluations and interdisciplinary review. (These decisions are activity plan or implementation level decisions.)

### MORE OPEN ROADS/FEWER OPEN ROADS

During the public comment period for the Draft RMP/EIS, public comments were received suggesting development of additional travel management alternatives that provided for more open roads for motorized access. In contrast, comments were also received suggesting alternatives for fewer open roads to reduce motorized access and promote more greatly improved natural resource conditions. The BLM reviewed the travel management alternatives in the Draft RMP/EIS. After this review, the BLM believes that the process it followed (described in **Appendix A**) meets the direction described at 43 CFR 8342 for travel planning. While the Preferred Alternative for three travel planning areas was slightly modified, the BLM believes that a reasonable range of alternatives has been provided in this RMP and that additional travel management alternatives are not warranted.

### ACCELERATED TIMBER MANAGEMENT

During the public comment period for the Draft RMP/EIS, an alternative was suggested to accelerate timber management to remove dead and dying trees from forests and woodlands to a greater degree than what the BLM has proposed in any of its existing alternatives. In considering the specifics of the proposed alternative, the BLM determined that proposed treatment acres identified in existing alternatives would treat three to four times the acreage presumed in the comment. Given the greater degree of treatment in existing RMP alternatives than presumed in the proposal for the additional alternative, combined with the fact that an alternative that promotes the production of timber over other resources would conflict with the multiple use mandates of FLPMA, the BLM believes that an additional alternative is not warranted.

## COMPARISON OF ALTERNATIVES

**Table 2-23** presents a comparison of the main concepts which comprise the alternatives and the numerical contrast between alternatives in terms of acres affected by the various management prescriptions. This table is organized by issue and management concern as presented in Chapter 2.

## COMPARISON OF IMPACTS

The environmental impacts of the alternatives can be compared by examining the key components described in **Table 2-24**. Chapter 4, Environmental Consequences includes a detailed description of the probable outcomes.

**Table 2-23**
**Comparison of Alternatives**

***ISSUE 1: Vegetation Communities***

***General Management***

## GENERAL APPROACH TO VEGETATION MANAGEMENT ACTIVITIES

### Goals

- Maintain and/or improve ecological health of woodland communities for sustainability and diversity.
- Manage dry forest types to contain healthy stands of site-appropriate species.
- Manage moist forest types to contain healthy stands that combine into a diversity of age classes and structure.
- Manage old growth forest structures in a sustainable manner.
- Minimize infestations of invasive plants and noxious weeds.
- Manage upland vegetation communities by including a full range of herbaceous and shrub species.
- Maintain or enhance communities of priority habitats to provide desired ecological functions and values.
- Manage riparian and wetland communities for the appropriate composition, density and age structure.
- Manage wetland and riparian habitats to support healthy, diverse and abundant populations of fish and associated aquatic and riparian dependent species.

### Management Common to All Alternatives

- Treatments in dry forest types (Douglas-fir, ponderosa pine, interspersed with limber pine) would be designed to mimic pre-fire suppression conditions.
- Emphasis would be on mechanical or hand thinning treatments in Wildland Urban Interface (WUI) areas.
- Outside WUI areas prescribed burning would be emphasized except when not economically feasible or if effects could be detrimental to vegetation or soils.
- Treatments in cool, moist forest types (Douglas-fir, lodgepole pine, subalpine fir, and spruce) would be focused on reducing stem densities and creating appropriate openings to mimic pre-fire suppression conditions.
- In lodgepole pine stands, mechanical treatments (including timber harvest) would be used to create openings to mimic stand-replacing fire events and to regenerate lodgepole pine.
- Grassland and shrubland habitats would be treated to remove conifers that have encroached into these areas in part due to fire suppression.
- Riparian vegetation would be treated to re-establish pre-fire suppression conifer stem densities and distribution. In areas of aspen this would include removing conifers.

**Table 2-23**
**Comparison of Alternatives**

## VEGETATION MANAGEMENT TOOLS

### Management Common to All Alternatives

- Mechanical treatments including thinning small and large diameter sized trees, chipping, grinding, or piling non-commercial sized trees would be used to restore vegetative conditions as needed in all vegetation types.
- Prescribed burning would be used to eliminate conifer encroachment and stimulate vegetative regrowth in grassland/shrubland habitats; and to reduce fuels, thin understories, recycle nutrients, and create small openings in forested vegetation types.
- Noxious weed treatments would include hand-pulling, chemical spray, biological treatments, cultural treatments, and public outreach.

***Grasslands and Shrublands – Priority Treatment Areas***

### Management Common to Action Alternatives (B, C, and D)

- Sagebrush and grassland distribution and vigor would be restored through vegetative treatments.
- Conifer reduction treatments could result in commercial forest products such as biomass, post and poles, and firewood.
- Up to 850 acres of crested wheatgrass seedlings, agriculture fields and weed infestations in the McMasters and Ward Ranch acquisitions would be converted from non-native vegetation to native vegetation.

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| | Priority treatment areas would include big game winter range, sagebrush, bighorn sheep habitat, and the Wildland Urban Interface. | Priority treatment areas would include big game winter range, Wildland Urban Interface, and current sage grouse habitat. | Priority treatment areas would include big game winter range, Wildland Urban Interface, current and historic sagebrush habitat, forest meadows and parks, and bighorn sheep habitat. |

***Grasslands Objectives - Proposed Range of Grassland Treatment Acres Per Decade by Major Watershed***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Big Hole - N/A | Big Hole -500 to 2,500 (of 16,344) | Big Hole - 100 to 250 (of 16,344) | Big Hole - 1,000 to 3,500 (of 16,344) |
| Blackfoot - N/A | Blackfoot - 0 to 50 (of <100) | Blackfoot – 0 (of <100) | Blackfoot - 0 to 100 (of <100) |
| Gallatin - N/A | Gallatin - 0 to 200 (of 860) | Gallatin – 0 (of 860) | Gallatin - 0 to 400 (of 860) |
| Jefferson - N/A | Jefferson - 500 to 3,000 (of 39,720) | Jefferson - 400 to 500 (of 39,720) | Jefferson - 1,000 to 6,000 (of 39,720) |
| Missouri - N/A | Missouri - 1,750 to 6,000 (of 73,965) | Missouri - 750 to 1,250 (of 73,965) | Missouri - 3,500 to 9,000 (of 73,965) |
| Yellowstone - N/A | Yellowstone - 0 to 50 (of 4,409) | Yellowstone – 0 (of 4,409) | Yellowstone - 0 to 50 (of 4,409) |
| Total - 5,250 (of 135,398) | Total - 2,750 to 11,800 (of 135,398) | Total - 1,250 to 2,000 (of 135,398) | Total - 5,500 to 19,050 (of 135,398) |

**Table 2-23**
**Comparison of Alternatives**

***Grasslands and Shrublands continued***

***Shrublands Objectives - Proposed Range of Shrubland Treatment Acres Per Decade by Major Watershed***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Big Hole -N/A | Big Hole -550 to 2,000 (of 12,126) | Big Hole -150 to 450 (of 12,126) | Big Hole -1,100 to 4,000 (of 12,126) |
| Blackfoot - N/A (of < 100) | Blackfoot - 0 to 50 (of < 100) | Blackfoot – 0 (of < 100) | Blackfoot - 0 to 100 (of < 100) |
| Gallatin - N/A | Gallatin - 0 to 50 (of < 100) | Gallatin – 0 (of < 100) | Gallatin - 0 to 100 (of < 100) |
| Jefferson - N/A | Jefferson - 300 to 1,000 (of 5,452) | Jefferson - 75 to 200 (of 5,452) | Jefferson - 600 to 1,500 (of 5,452) |
| Missouri - N/A | Missouri - 150 to 500 (of 1,714) | Missouri - 25 to 100 (of 1,714) | Missouri - 150 to 1,000 (of 1,714) |
| Yellowstone - N/A | Yellowstone - 0 to 50 (of 366) | Yellowstone – 0 (of 366) | Yellowstone - 0 to 100 (of 366) |
| Total – 0 (of 19,858) | Total - 1,000 to 3,650 (of 19,858) | Total - 250 to 750 (of 19,858) | Total - 1,850 to 6,800 (of 19,858) |

***Grasslands and Shrublands - Revegetation Seed Mix***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Native Seed Mixture Unless Modified Through NEPA | Native or low impact, non-invasive seed mixtures would be used to restore vegetation on disturbed ground. | Only native seed species would be used to restore vegetation on disturbed ground. | Same as Alternative B. |

***Forests and Woodlands***

**Goals**

- Restore and/or maintain the health and productivity of public forests, to provide a balance of forest and woodland resource benefits to present and future generations.
- Manage forestry resources to provide a sustained flow of local economic benefits and protect non-market economic values.

**Management Common to All Alternatives**

- Vegetation structure, density, species composition, patch size, pattern, and distribution would be managed in a manner to reduce the occurrence of unnaturally large and severe wildland fires and forest insect outbreaks.
- Stands with characteristics indicating a substantial risk of developing epidemic levels of forest insects and/or disease would be high priority for treatments to reduce risk.
- BLM would continue to provide personal use firewood and Christmas tree cutting permits offered cooperatively with the Forest Service, valid for wood collection from BLM and National Forest lands.
- Salvage of forest products resulting from wildland fire, prescribed fire, forest insects, and disease, weather induced or other forest mortality events would be considered.
- Timber salvage project areas would consist of small openings, thinning between openings, and retention patches. In the event of large-scale disturbances, patches of dead and dying forest would be maintained for wildlife dependent upon this type of habitat.

- In all areas with dead and dying trees, tree cutting would be allowed to provide for human safety, fire rehabilitation, and forest or stream restoration activities.
- Tractor logging would generally be limited to slopes with average gradients of less than 40 percent and the season of logging would be limited to reduce soil compaction and rutting.
- Mechanical treatments would be laid out to minimize risk of windthrow, and shelterwood harvests would be made to improve genetic composition of regenerated stands.
- Whenever possible, openings larger than 20 acres resulting from forest treatments or disturbance events would be planted when natural regeneration does not occur at desired levels within 15 years or cannot be reasonably expected in 5 to 15 years.

**Management Common to Action Alternatives (B, C, and D)**

- Natural disturbance regimes would be maintained or mimicked so that plant communities are resilient when periodic outbreaks of insects, disease, and wildland fire occur.
- Vegetation manipulation projects would be designed to minimize impacts to wildlife habitat and improve it when possible.
- Forest management would emphasize old forest structures, snag management, and large diameter trees for cavity nesters where appropriate.
- The BLM would strive to maintain and/or restore stands with old forest structure within historic range of variability to maintain and/or enhance habitat for old growth dependent species.
- BLM would design fire restoration/rehabilitation standards on a case-by-case basis, compatible with landscape resource management objectives and long-term (25-year) vegetation health protection and fuels management.

**FOREST PRODUCTS**

- In all action alternatives, commercial harvest of forest products would normally be associated with vegetative restoration (including forest health) and fuels treatments and would be designed to meet objectives for forest management, wildlife habitat management, fire hazard reduction, hazard tree removal, special status species management, visuals, recreation, and travel management.
- Special forest and range products would be managed according to sustainability limits and where consistent with other resource management objectives.
- Residual stands left by disturbance events would be maintained to provide for natural regeneration and diversity of forest systems.
- Firewood cutting would not be allowed in WSAs.

***Forests and Woodlands (Dry Forest) Objectives – Proposed Range of Dry Forest Treatment Acres Per Decade by Major Watershed***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Big Hole - N/A | Big Hole - 1,150 to 2,500 (of 19,905) | Big Hole - 250 to 650 (of 19,905) | Big Hole - 2,000 to 3,500 (of 19,905) |
| Blackfoot - N/A | Blackfoot - 0 to 100 (of 368) | Blackfoot – 0 (of 368) | Blackfoot - 0 to 200 (of 368) |
| Gallatin - N/A | Gallatin - 0 to 150 (of 533) | Gallatin – 0 (of 533) | Gallatin - 0 to 300 (of 533) |
| Jefferson - N/A | Jefferson - 1,000 to 4,000 (of 31,936) | Jefferson - 650 to 1,450 (of 31,936) | Jefferson - 2,000 to 5,000 (of 31,936) |
| Missouri - N/A | Missouri - 1,900 to 7,000 (of 59,988) | Missouri - 1,150 to 2,700 (of 59,988) | Missouri - 3,000 to 7,700 (of 59,988) |
| Yellowstone - N/A | Yellowstone - 100 to 1,000 (of 2,196) | Yellowstone – 0 (of 2,196) | Yellowstone - 300 to 1,500 (of 2,196) |
| Total - 5,100 (of 114,926) | Total - 4,150 to 14,750 (of 114,926) | Total - 2,050 to 4,800 (of 114,926) | Total - 7,300 to 18,200 (of 114,926) |

**Table 2-23**
**Comparison of Alternatives**

***Forests and Woodlands (Cool, Moist Forest) Objectives - Proposed Range of Cool, Moist Forest Treatment Acres Per Decade by Major Watershed***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Big Hole - N/A | Big Hole - 200 to 1,600 (of 9,868) | Big Hole - 20 to 200 (of 9,868) | Big Hole - 400 to 1,800 (of 9,868) |
| Blackfoot - N/A | Blackfoot - 0 to 100 (of <500) | Blackfoot – 0 (of <500) | Blackfoot - 0 to 150 (of <500) |
| Gallatin - N/A | Gallatin - 0 to 50 (of <100) | Gallatin – 0 (of <100) | Gallatin - 0 to 100 (of <100) |
| Jefferson - N/A | Jefferson - 50 to 300 (of 2,059) | Jefferson - 5 to 50 (of 2,059) | Jefferson - 50 to 500 (of 2,059) |
| Missouri - N/A | Missouri - 200 to 1,600 (of 7,165) | Missouri - 20 to 275 (of 7,165) | Missouri - 500 to 2,300 (of 7,165) |
| Yellowstone - N/A | Yellowstone - 0 to 100 (of 551) | Yellowstone - 5 to 25 (of 551) | Yellowstone - 50 to 200 (of 551) |
| Total - 2,400 (of 20,243) | Total - 450 to 3,750(of 20,243) | Total - 50 to 550 (of 20,243) | Total - 1,000 to 5,050 (of 20,243) |

***Forests and Woodlands (Forest Products Objectives) - Probable Sale Quantity***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Probable Sale Quantity would be 12 to 27 MMBF (40,000 to 97,000 CCF) per decade. | Probable Sale Quantity would be 9 to 25 MMBF (33,000 to 91,000 CCF) per decade. | Probable Sale Quantity would be 5 to 12 MMBF (19,000 to 41,000 CCF) per decade. | Probable Sale Quantity would be 10 to 30 MMBF (36,000 to 107,000 CCF) per decade. |

***Forests and Woodlands (Forest Products) - Small Sales***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| The following permit types and estimated quantities would be anticipated to be permitted per decade under the small sales program:<br>• 350 Permits:<br>• 4,500 Christmas Trees<br>• 750 Cords Firewood<br>• 1,650 MBF Sawtimber (Included with PSQ)<br>• 55 CCF Post, poles, biomass, other woody materials | The following permit types and estimated quantities would be anticipated to be permitted per decade under the small sales program:<br>• 450 Permits:<br>• 5,500 Christmas Trees<br>• 1,000 Cords Firewood<br>• 2,100 MBF Sawtimber (Included with PSQ)<br>• 77 CCF Post, poles, biomass, other woody materials | The following permit types and estimated quantities would be anticipated to be permitted per decade under the small sales program:<br>• 150 Permits:<br>• 4,500 Christmas Trees<br>• 50 Cords Firewood<br>• 500 MBF Sawtimber (Included with PSQ)<br>• 55 CCF Post, poles, biomass, other woody materials | The following permit types and estimated quantities would be anticipated to be permitted per decade under the small sales program:<br>• 600 Permits:<br>• 9,000 Christmas Trees<br>• 1,500 Cords Firewood<br>• 5,200 MBF Sawtimber (Included with PSQ)<br>• 105 CCF Post, poles, biomass, other woody materials |

**Table 2-23**
**Comparison of Alternatives**

***Forests and Woodlands (Forest Products) - Small Sales/Firewood Cutting***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Removal of dead, down, or green trees for firewood could be allowed. | Unless specifically designated, standing dead or down wood may be taken as firewood. At times, BLM could designate specific areas for firewood cutting of live trees to meet other resource objectives. | No standing dead trees or down wood would be allowed to be removed for firewood unless authorized in designated areas. Live trees could be removed for firewood in designated locations, and the joint firewood permit system used by BLM and the USDA Forest Service could not be used. | Same as Alternative B. |
| No diameter limits for firewood cutting are prescribed. | No dead trees > 24" DBH would be allowed to be taken as firewood. | No live trees >20" DBH would be allowed to be taken as firewood. | Same as Alternative B. |
| No related action. | Firewood cutting would not be allowed within 100' of live (year-long flow) streams. Firewood cutting would not be allowed within 50' of intermittent streams. | Firewood cutting would not be allowed within 200' of live (year-long flow) streams. Firewood cutting would not be allowed within 100' of intermittent streams. | Firewood would not be allowed to be cut within 100 feet of live (yearlong flow) streams or within 50 feet of intermittent streams or within the Streamside Management Zone, whichever width is greatest. |

***Forests and Woodlands (Forest Products) - Timber Salvage***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Salvage may proceed without prescriptive restrictions for species dependant on dead and dying forests or species dependant on down woody materials, but will continue to be subject to other restrictions, resource protections or special management considerations required for all forest management activities under Alternative A. | When salvage is proposed in dead and dying forests, contiguous acres of undisturbed standing and down woody material would be retained in adequate amounts for those wildlife species that depend on this type of habitat.<br>Outside of the contiguous areas identified for retention, harvest treatments may include: 1) forest openings appropriate for the site and retention patches of uncut dead and dying trees; or 2) forest openings appropriate for the site with selective thinning between openings and retention patches of uncut dead and dying trees; or 3) selective thinning and retention patches of uncut dead and dying trees. | Where contiguous acres of dead and dying forest exceed 1,000 acres, 50 percent of the area would be maintained as retention. Harvest treatments within the remaining project area may include: 1) creation of forest openings, 2) selective thinning between openings and 3) 50 percent total retention across the harvest treatment area. | Where contiguous acres of dead and dying forest exceed 1,000 acres, 30 percent of the area would be maintained as retention. Harvest treatments within the remaining project area may include: 1) creation of forest openings, 2) selective thinning between openings, and 3) no retention requirements within harvest treatment area. |

**Table 2-23**
**Comparison of Alternatives**

***Forests and Woodlands (Forest Products) - Road Access***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Roads would be constructed to the minimum standards necessary to remove the timber, unless the roads would be needed for other public purposes requiring a higher standard.<br>If needed, up to 5.5 miles of new permanent roads could be constructed per year to provide access for treatments. | Some new permanent roads may be built for long-term management of areas where multiple entries would be necessary to meet objectives. New road construction would be kept to a minimum. Temporary road construction would also be kept to a minimum, and temporary roads would be decommissioned within one year of project completion. Refer to temporary roads definition in glossary. | Forest treatments would occur in areas already accessible by the current road system. No new permanent roads would be constructed. Temporary road construction would be kept to a minimum. Temporary roads would be decommissioned within 1 year of project completion. Refer to temporary roads definition in glossary. | Some new permanent roads may be built for long-term management of areas where multiple entries would be necessary to meet objectives. New road construction, however, would be kept to a minimum. Some new permanent roads could be left open to the public if travel plan objectives for the area are met. Temporary road construction would be kept to a minimum. Refer to temporary roads definition in glossary. |

***Riparian Vegetation***

**Management Common to All Alternatives**

- At the Field Office scale, management would restore and improve riparian areas and wetlands. Riparian areas that are functioning at risk would be a high priority for restoration.
- Authorized activities within riparian areas would strive to maintain and restore riparian structure and function, benefit fish and riparian-dependant species, enhance conservation of organisms that depend on the transition zone between upslope and the stream, and maintain or improve the connectivity of travel and dispersal corridors for terrestrial animals and plants.
- Forested riparian habitats would be managed to accelerate the development of mature forest communities to promote shade, bank stability, and woody debris recruitment. Late-successional riparian vegetation would be promoted in amounts and distribution similar to historic conditions.
- The Montana Streamside Management Zone law would be followed as a minimum to protect riparian resources.
- Riparian communities, habitat, and associated uplands would be treated and restored through implementation of livestock grazing guidelines to meet Land Health Standards.

**Management Common to Action Alternatives (B, C, and D)**

- Riparian areas would be managed to provide the amount and distribution of large, woody material characteristic of natural aquatic and riparian ecosystems. Trees may be felled in riparian areas when they pose a safety risk or are needed to enhance riparian function/condition. Felled trees would be kept on site when needed to meet woody debris objectives.
- BLM would cooperate with federal, tribal, and state wildlife management agencies and private landowners to identify activities that prevent meeting riparian standards. In cooperation with those agencies, projects or management measures would be designed to minimize impacts.
- Mechanical or hand cutting and/or prescribed burning would be used to remove competing conifers from riparian ecosystems, including aspen clones. Commodity removal of juniper would be encouraged.

**Table 2-23**
**Comparison of Alternatives**

***Riparian Vegetation – Riparian Management Zones (RMZs)***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Managed per the Montana Streamside Management Zone Law. | RMZs from the edge of the aquatic habitat would be established as follows:<br>**Forested Areas**<br>Streams, lakes, ponds, and reservoirs containing fish: The RMZ would consist of the water body and a zone located on all sides of the water body.<br>This zone would extend from the outer edges of the bankfull channel (average high water mark), full pool, or adjacent wetland a distance equal to the height of two site-potential trees. (Site potential tree height – within forested areas would be the average maximum potential height of dominant trees, in the RMZ).<br>Perennial non-fish bearing streams: The RMZ would consist of the stream and a zone located on both sides of the channel. This zone would extend from the outer edges of the bankfull channel (or adjacent wetland) a distance equal to one site-potential tree height.<br>Non-fish bearing ponds, lakes, reservoirs, or wetlands greater than 1 acre: The RMZ would extend from the outer edge of the full pool or wetland a distance equal to one site-potential tree height or to the edge of seasonally saturated soil or wetland vegetation, whichever is greater. | RMZs from the edge of the aquatic habitat would be established as follows:<br>**Forested Areas**<br>Streams, lakes, ponds, and reservoirs containing fish: The RMZ would consist of the water body and a zone located on all sides of the water body.<br>This zone would extend from the outer edges of the bankfull channel, full pool, or adjacent wetland a distance equal to the top of the inner gorge, or the outer edge of the 100-year floodplain, or 300 feet slope distance, whichever is greatest.<br>Perennial non-fish bearing streams: The RMZ would consist of the stream and a zone located on both sides of the channel. This zone would extend from the outer edges of the bankfull channel (or adjacent wetland) a distance equal to the top of the inner gorge, the outer edge of the 100 year floodplain, or 150 feet slope distance whichever is greatest.<br>Non-fish bearing ponds, lakes, reservoirs, or wetlands greater than 1 acre: The RMZ would extend 150 feet slope distance from the outer edge of the full pool or wetland. This area would also include all moderately and highly unstable areas. | Same as Alternative A. |

**Table 2-23**
**Comparison of Alternatives**

***Riparian Vegetation – Riparian Management Zones (RMZs) – continued***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| | Intermittent streams and wetlands less than 1 acre: The RMZ would consist of the water body and a zone located on all sides of the water body. This zone would extend at least 50 feet from the outer edges of the bankfull channel or adjacent wetland.<br><br>**Non-forested Areas**<br><br>For fish-bearing and non-fish bearing streams, lakes, ponds, and reservoirs: the RMZ would consist of the water body and a zone located on all sides of the water body. This zone would extend from the outer edges of the bankfull channel (average high-water mark), full pool, or adjacent wetland a distance that encompasses the active floodplain. The RMZ would extend 50 feet above the break in slope leading down from the lowest terrace to the floodplain, or in segments where trees are present, to a distance equal to 1 site-potential tree height from the edge of the feature, whichever is greatest.<br><br>Intermittent streams and wetlands less than 1 acre: RMZs would be 50 feet from the edge of wetland vegetation or active stream channel as indicated by riparian vegetation, saturated soil, or water. The criteria for selecting the width may be different for each side of the water body. | Intermittent streams and wetlands less than 1 acre: The RMZ would consist of the water body and a zone located on all sides of the water body. This zone would extend at least 50 feet slope distance from the outer edges of the bankfull channel or wetland.<br><br>**Non-forested Areas**<br><br>Perennial fish-bearing and non fish-bearing streams or wetlands larger than 1 acre: The RMZ would consist of the water body and a zone located on all sides of the water body. This zone would extend from the outer edges of the bankfull channel, full pool, or adjacent wetland a distance that encompasses the active floodplain. RMZs would extend 150 feet above the break in slope leading down from the lowest terrace to the floodplain.<br><br>Intermittent streams and wetlands less than 1 acre: The RMZ would consist of the water body and a zone located on all sides of the water body. This zone would extend at least 50 feet from the outer edges of the bankfull channel or wetland. | |

**Table 2-23**
**Comparison of Alternatives**

***Riparian Vegetation Objectives - Proposed Range of Riparian Vegetation Treatment Acres Per Decade by Major Watershed***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Big Hole - N/A | Big Hole - 50 to 200 (of 3,139) | Big Hole - 20 to 50 (of 3,139) | Big Hole - 75 to 650 (of 3,139) |
| Blackfoot - N/A | Blackfoot - 0 to 40 (of 92) | Blackfoot – 0 (of 92) | Blackfoot - 0 to 40 (of 92) |
| Gallatin - N/A | Gallatin - 0 to 10 (of 22) | Gallatin – 0 (of 22) | Gallatin - 0 to 10 (of 22) |
| Jefferson - N/A | Jefferson - 50 to 200 (of 2,846) | Jefferson - 20 to 50 (of 2,846) | Jefferson - 75 to 300 (of 2,846) |
| Missouri - N/A | Missouri - 100 to 200 (of 4,651) | Missouri - 35 to 100 (of 4,651) | Missouri - 150 to 600 (of 4,651) |
| Yellowstone - N/A | Yellowstone - 0 to 50 (of 350) | Yellowstone – 0 (of 350) | Yellowstone - 0 to 100 (of 350) |
| Total – 30 (of 11,100) | Total - 200 to 700 (of 11,100) | Total - 75 to 200 (of 11,100) | Total - 300 to 1,700 (of 11,100) |

Note: Treatment acres are by mechanical and prescribed burning methods. For Alternative A, this treatment figure is a continuation of what has occurred; however, the current plan allows treatment in all riparian areas subject to other management constraints.

***Riparian Vegetation – Aspen***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| No related action. | Where the primary project objective is aspen restoration, treated aspen stands would be fenced from livestock and wildlife when recovery could be suppressed by grazing and browsing. Fencing could consist of using native, on-site materials as barriers. | The structure and composition of aspen stands would be determined by natural processes or treated opportunistically through other projects. Treated aspen stands would be fenced from livestock grazing and, if necessary, wildlife grazing, and browsing. There would be an emphasis on using native, on-site materials for "natural" barriers. | Same as Alternative B. |

***Livestock Grazing***

**Goals**

- Manage for a sustainable level of livestock grazing while meeting or progressing toward Land Health Standards.
- Maintain, restore, or enhance BLM rangelands to meet the Land Health Standards.
- Manage livestock grazing to provide a sustained flow of local economic benefits and protect non-market economic values.

**Table 2-23**
**Comparison of Alternatives**

***Livestock Grazing continued***

**Management Common to All Alternatives**

- Livestock grazing would be managed through Implementation of Standards for Rangeland Health and Guidelines for Livestock Grazing.
- Cooperatively managed allotments with the USFS and Dillon Field Office would continue under existing Memoranda of Understanding. Applications for unleased allotments and vacant available lands would be considered on a case-by-case basis.
- Adjustments to livestock management practices or livestock numbers would be made based on results of monitoring studies, rangeland health assessments, allotment evaluations, and interdisciplinary review.
- Functional wildlife escape ramps would be installed and maintained on all water tanks on BLM lands.
- Grazing practices in riparian areas that retard or prevent attainment of riparian goals or proper functioning condition would be modified.
- New fences would be built to standard BLM wildlife specifications to allow wildlife passage
- Livestock grazing guidelines for residual cover and monitoring of forage utilization in new or revised Allotment Management Plans would be developed.
- No new term grazing permits would be authorized on river islands.
- Water developments for livestock generally would not be established in areas where significant conflicts with wildlife forage and habitat occur.
- Sufficient forage and cover would be provided for wildlife on seasonal habitat.

**Management Common to Action Alternatives (B, C, and D)**

- For allotments without specific management objectives, the utilization level as measured at the end of the grazing season would not exceed 55 percent on non-native seedlings and 45 percent on native herbaceous forage plants.
- Grazing uses on lands proposed for acquisition would be considered on a case-by-case basis based on the values identified for the acquisition.
- No new kind of livestock conversions from sheep or cattle to horses would be allowed on existing allotments smaller than 160 acres.
- BLM would develop and implement appropriate grazing strategies in grizzly bear distribution zones.

***Livestock Grazing – Allowable Use***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Livestock grazing would be allowed on about 278,000 acres. The amount of forage available on these lands would be 25,677 Animal Unit Months (AUMs). | Livestock grazing would be allowed on about 270,000 acres of public land. The amount of forage available on these lands would be 24,710 AUMs active use and 1,312 AUMs forage reserve, temporary non-renewable AUMs. | Livestock grazing would be allowed on about 262,000 acres of public land. The amount of forage available on these lands would be 24,710 AUMs active use and 936 AUMs forage reserve, temporary non-renewable AUMs. | Same As Alternative A |

**Table 2-23**
**Comparison of Alternatives**

| ***Livestock Grazing - McMasters/Spokane Hills Areas*** | | | |
|---|---|---|---|
| **Alternative A - No Action** | **Alternative B - Preferred** | **Alternative C** | **Alternative D** |
| After the current permittee ceases livestock grazing, the McMaster Hills and Spokane Hills individual allotments would become vacant and available to qualified applicants per the grazing regulations. These allotments would be administered like all other existing allotments. | After the current permittee ceases livestock grazing, the McMaster Hills and Spokane Hills individual allotments would become forage reserve allotments. Use would be authorized on a temporary, nonrenewable basis. | Same as Alternative B. | Same as Alternative A. |
| ***Livestock Grazing - Indian Creek/Iron Mask Areas*** | | | |
| **Alternative A - No Action** | **Alternative B - Preferred** | **Alternative C** | **Alternative D** |
| The existing Indian Creek allotment (2,215 acres and 376 AUMS) would be expanded up to an additional 5,566 acres and 700 AUMS by the Iron Mask acquisition. The Indian Creek allotment would be available to qualified applicants per the grazing regulations. This allotment would be administered like all other existing allotments. | The existing Indian Creek allotment would be expanded up to 5,566 additional acres and 700 AUMS by the Iron Mask acquisition. The allotment would be managed as a forage reserve allotment. Use would be authorized on a temporary, nonrenewable basis. | The existing Indian Creek allotment (2,215 acres and 376 AUMS) as well as any lands acquired from the Iron Mask acquisition would be unavailable for grazing lease or permit. | Same as Alternative A. |
| ***Livestock Grazing – Centennial Gulch Area*** | | | |
| **Alternative A - No Action** | **Alternative B - Preferred** | **Alternative C** | **Alternative D** |
| The Medicine Rock riparian areas would not be available for prescription livestock grazing. The Centennial Gulch (Ward Ranch) allotment would be available to qualified applicants per the grazing regulations. | The Centennial Gulch (Ward Ranch) allotment and Medicine Rock (Northeast Helena) riparian area would only be available for prescription livestock grazing to meet specific resource objectives. | Same as Alternative B. | Same as Alternative A. |

**Table 2-23**
**Comparison of Alternatives**

***Livestock Grazing – Relinquished Allotments***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Allotments where grazing preference is relinquished would remain available for livestock grazing leases or permits. | After the current permittee ceases livestock grazing, the McMaster Hills and Spokane Hills individual allotments would be established as forage reserve allotments (an allotment without a term grazing permit that is grazed on a temporary nonrenewable basis. This type of allotment would be used to provide temporary grazing to rest other areas following wildfire, habitat treatments, or to allow for more rapid attainment of rangeland health). Forage reserve allotments would be managed to meet, or move toward meeting, land health standards. Use would be authorized on a temporary, nonrenewable basis. The amount of use would be determined by the BFO. Applicants would be required to meet qualifications per the grazing regulations, and show the ability and commitment to repair and maintain improvements and infrastructure. The BFO would rank qualified applicants according to the following criteria in priority order:<br>1. Implementing projects or vegetation management on BLM lands.<br>2. Facilitating a change in management to improve resource conditions on BLM allotments.<br>3. Accommodating permittees or lessees displaced by natural causes (i.e. wildland fire, drought, insect infestations, etc.)<br>The criteria found at 43 CFR §4130.1-2 (USDI-BLM 2006a) when conflicting applications are submitted. | Same as Alternative B. | Same as Alternative A. |

**Table 2-23**
**Comparison of Alternatives**

***Livestock Grazing – Rest from Grazing Before Prescribed Burning***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Rest from livestock grazing in areas identified for prescribed burning would be determined through site-specific interdisciplinary planning and NEPA processes. | Areas identified for prescribed burning would be rested from livestock grazing up to one year prior to treatment if necessary to produce fine fuels to carry the burn, and for a minimum of two growing seasons following treatment to promote recovery of vegetation. Livestock rest for more or less than two growing seasons could be justified on a case-by-case basis. | Areas identified for prescribed burning would be rested from livestock grazing up to one year prior to treatment if necessary to produce fine fuels to carry the burn, and for a minimum of two growing seasons following treatment to promote recovery of vegetation. | Areas identified for prescribed burning would be rested from livestock grazing prior to treatment if necessary to produce fine fuels to carry the burn, and for a minimum of one growing season following treatment to promote recovery of vegetation. Livestock rest for more than one growing season could be justified on a case-by-case basis. |

***Livestock Grazing – Adjustments***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Forage and cover requirements would be incorporated into allotment management plans and would be specific to areas of primary wildlife use. | Grazing practices would be adjusted to protect or enhance fish and wildlife habitat when livestock grazing is a contributing factor to not meeting land health standards. | Guidelines for residual ground cover would be developed in Allotment Management Plans. Forage utilization would be monitored. | Same as Alternative B. |

***Livestock Grazing - Exclosures***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| No related action. | Range projects would be maintained as long as needed to meet management objectives. Maintenance would be assigned to grazing permittees, other authorized public land users, or the BLM. Routine maintenance would be completed according to the maintenance schedule per the terms and conditions of existing cooperative agreements. | Currently existing exclosures would be maintained free from livestock grazing. Exclosures would be maintained annually before livestock turnout and would be monitored to compare differences between grazed and ungrazed areas. | Currently existing exclosures would be maintained free from livestock grazing. Exclosures would be checked and maintained every five years. |

**Table 2-23**
**Comparison of Alternatives**

***Livestock Grazing - Bighorn Sheep***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Existing Instruction Memorandum 98-140 (USDI-BLM 1998b) would be followed to protect wild sheep. | No change in livestock conversions from cattle to domestic sheep or goats would be allowed in allotments within occupied wild sheep habitat.<br><br>New sheep and goat allotments or conversions from cattle to sheep or goats would be permitted a minimum of 5 miles from known bighorn sheep habitat. This distance would be greater if deemed necessary through site-specific analysis.<br><br>Goats and sheep could be used for weed control on winter ranges when wild sheep are absent.<br><br>To minimize contact with bighorn sheep, domestic sheep and goats used for weed control would only be allowed to graze for up to 1 month near occupied bighorn sheep habitat and there would be a minimum buffer of 2 miles between domestic and wild sheep. Bedding grounds would be at least 4 miles from known bighorn sheep habitat. The use of domestic sheep and goats would only be allowed from 5/1 to 7/31, unless coordinated with MFWP. A herder would be required to be on site at all times and be able to communicate with the BLM, the herd owner and MFWP. If bighorn sheep and domestic sheep and goats come into contact, the herder would be required to contact the BLM and MFWP immediately. | No change in livestock conversions from cattle to domestic sheep or goats would be allowed in allotments within occupied wild sheep habitat.<br><br>New sheep and goat allotments or conversions from cattle to sheep or goats would be permitted a minimum of 9 miles from known bighorn sheep habitat. This distance would be greater if deemed necessary through site specific analysis.<br><br>Goats and sheep could be used for weed control on winter ranges when wild sheep are absent.<br><br>To minimize contact with bighorn sheep, domestic sheep and goats used for weed control would only be allowed to graze for up to two weeks near occupied bighorn sheep habitat and there would be a minimum buffer of 4 miles between domestic and wild sheep. Bedding grounds would be at least 6 miles from known bighorn sheep habitat. The use of domestic sheep and goats would only be allowed from 5/15 to 7/15 unless coordinated with MFWP. A herder would be required to be on site at all times and be able to communicate with the BLM, the herd owner and MFWP. If bighorn sheep and domestic sheep and goats come into contact, the herder would be required to contact the BLM and MFWP immediately. | The existing Instruction Memorandum 98-140 (USDI-BLM 1998b) would be followed to protect wild sheep. Goats and sheep could be used for weed control on winter ranges when wild sheep are absent.<br><br>To minimize contact with bighorn sheep, domestic sheep and goats used for weed control would only be allowed to graze for up to 1 month near occupied bighorn sheep habitat and there would be a minimum buffer of 2 miles between domestic and wild sheep. Bedding grounds would be at least 4 miles from known bighorn sheep habitat. The use of domestic sheep and goats would only be allowed from 5/1 to 7/31 unless coordinated with MFWP. A herder would be required to be on site at all times and be able to communicate with the BLM, the herd owner and MFWP. If bighorn sheep and domestic sheep and goats come into contact, the herder would be required to contact the BLM and MFWP immediately. |

**Table 2-23**
**Comparison of Alternatives**

***Wildland Fire Management***

**Goals**

- Provide an appropriate management response to all wildland fires, emphasizing firefighter and public safety.
- Move toward restoring and maintaining desired ecological conditions consistent with appropriate fire regimes.
- Minimize the adverse effects of fire on resources, resource uses, and wildland-urban interface.
- Promote seamless fire management planning across jurisdictions within the boundaries of the BFO.
- Protect life and property by treating hazardous fuels on BLM lands near Wildland Urban Interface.

**Management Common to All Alternatives**

- The Beaverhead-Deerlodge National Forest, Helena National Forest, Gallatin National Forest, and the State of Montana DNRC would implement fire preparedness, prevention, and suppression on BLM administered lands through the interagency offset and six party fire protection agreements.
- Use of retardant in Wilderness Areas or WSAs would be avoided and would require line officer approval.
- Use of heavy equipment would be restricted to areas outside of Wilderness or WSAs.
- Minimum Impact Suppression Tactics would be used when working in a Wilderness Area or WSAs, following the Interim Management Policy and Guidelines for Lands under Wilderness Review (BLM Handbook H-8550-1). BLM would manage naturally ignited wildland fires in the Elkhorn Mountain units under the prescription guidelines established in the Elkhorn Mountains Fire Management Plan.
- Fire Management activities (wildland fire, fuels, and fire mitigation, education and prevention) would be prioritized by their risk of life and property across the Planning Area. Fires that are adjacent to or near WUI would have highest priority for fire suppression.
- Fire management activities would be designed and implemented in a manner that meets, or moves toward meeting Land Health Standards. Wildland fire management activities would be conducted to meet or move toward meeting Land Health Standards when compliant with the standards for fire operations.
- Emergency fire rehabilitation funds may be used to:
    a. Protect life, property, and soil, water and vegetation resources.
    b. Prevent unacceptable onsite or offsite damage.
    c. Facilitate meeting land use plan goals and other federal laws.
    d. Reduce the invasion and establishment of undesirable or invasive vegetation.
- Incident bases, camps, helibases, staging areas, and other incident management activities would be located outside of riparian areas. If unavoidable, an exemption could be made by a resource advisor.
- BLM would implement management actions that maintain or move plant communities to the historic fire regime and condition classes. In areas where the environment has changed substantially and a return to historic conditions is not possible or ecologically desirable, the appropriate fire regime would be determined based on current management.
- BLM would provide assistance to communities in developing and maintaining community wildland fire protection plans.

**Table 2-23**
**Comparison of Alternatives**

***Wildland Fire Management - continued***

**Management Common to Action Alternatives (B, C, and D)**

- Priority of fire management activities would be placed on fuels reduction in WUI areas in conjunction with completed Community Wildfire Protection Plans.
- Fire management activities outside of the WUI areas would use Fire Regime, Condition Class (FRCC) to determine level of fuels treatments.
- Fire management would focus on maintaining fire dependent ecosystems and restoring or maintaining those areas outside their natural balance through mechanical, chemical, and/or prescribed fire treatments.
- Spread of non-native invasive aquatic species as well as additional resource values would be addressed in the Butte Field Office Fire Management Plan to be revised after finalization of this RMP.

***Fire Management Response***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| The BLM administered ground is currently is managed under A, B, and C FMU designations (for description of FMU designations see Chapter 2). Approximately 7,300 acres would be designated in an A FMU, 36,700 acres would be designated in a B FMU, and 258,200 acres would be designated in a C FMU. | BLM administered ground would be managed under B and C FMU designations (for description of FMU designations see Chapter 2) based on watersheds. No acres would be designated in an A FMU, 52,000 acres would be designated in a B FMU, and 255,000 acres would be designated in a C FMU. | BLM administered ground would be managed under A, B and C FMU designations (for description of FMU designations see Chapter 2) based on watersheds. Approximately 41,000 acres would be designated in an A FMU, 23,000 acres would be designated in a B FMU, and 243,000 acres would be designated in a C FMU. | BLM administered ground would be managed under B, C, and D FMU designations (for description of FMU designations see Chapter 2) based on watersheds. No acres would be designated in an A FMU, 42,000acres would be designated in a B FMU, 82,000 acres would be designated in a C FMU, and 183,000 acres would be designated in a D FMU. |

***Fire - Timing Periods***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| No related action. | Management-ignited prescribed fire would not be conducted between May 1 and August 30 to protect nesting migratory birds, unless breeding bird surveys document low potential impacts to breeding birds. | Vegetation treatments, including management-ignited prescribed fire and mechanical treatments would not be conducted between May 1 and August 30 to protect nesting migratory birds, unless breeding bird surveys document low potential impacts to breeding birds. | Same as Alternative A. |

**Table 2-23**
**Comparison of Alternatives**

***Fire - Habitat w/in Burn Patches***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| No related action. | In grassland/shrubland habitats, BLM would plan for prescribed burns that do not consume above-ground vegetation on more than 80 percent (on average) of each unit by surface area. | In grassland/shrubland habitats, BLM would plan for prescribed burns that do not consume above-ground vegetation on more than 60 percent (on average) of each unit by surface area. | In grassland/shrubland habitats, BLM would plan for prescribed burns that do not consume above-ground vegetation on more than 90 percent (on average) of each unit by surface area. |

***Fire - Fire Retardant***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| No related action. | Delivery of chemical retardant, foam or additives to live streams would be avoided. Maps of fish bearing streams would be developed for use in initial attack of wildland fires. | Use of chemical retardant foam, or additives over live streams would only occur if there a risk to human life and safety. | Delivery of chemical retardant, foam or additives to live streams would be avoided. |

***Fire - Fish Screens***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| No related action. | Fish screens (1/8 inch diameter holes) on hoses would be required when removing water from fish bearing streams during fire management activities. | Same as Alternative B. | Same as Alternative A. |

***Noxious Weeds***

**Goal**

- Minimize infestations of invasive plants and noxious weeds.

**Management Common to All Alternatives**

- Weed management would utilize Integrated Weed Management and work within federal, state, and county guidelines, laws, statutes, plans, and regulations to minimize infestations of invasive plants and noxious weeds.
- Management would continue to work cooperatively and coordinate with county, state, and federal agencies, weed management areas, and private landowners and organizations.
- Weed management prescriptions would be included in all new treatment projects and incorporated, where possible, into existing contracts, agreements and land use authorizations which would result in ground disturbing activities.
- Weed seed free forage (hay, grains, cubes, pelletized feeds, straw, and mulch) would be used on BLM lands.
- Monitoring would evaluate weed management activities at project and field office levels.
- All weed treatment ranges represent only 10 to 15 percent treatment of new acres. The remainder would be repeat treatments on the same infestations.

**Table 2-23**
**Comparison of Alternatives**

***Noxious Weeds - continued***

**Management Common to Action Alternatives (B, C, and D)**

- All contractor and BLM equipment would be power washed to remove weed seeds before entering ground disturbing project areas.
- Weed control using domestic sheep and/or goats in occupied bighorn sheep habitat or using biological controls which have been documented to damage existing desired species would be prohibited.
- BLM would conduct outreach and education for BLM personnel, public land users, and the general public.
- BLM would encourage development of weed management areas.
- Plant communities would be restored, where applicable, to promote resistance to weed invasion.

***Noxious Weeds Objectives - Proposed Range of Weed Treatment Acres Per Decade***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| 20,000 | 21,000 to 50,000 | 16,000 to 38,000 | 25,000 to 61,000 |

***Noxious Weeds - Treatment Focus/Priorities***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Management on roads and trails, urban interface and recreation areas, and areas currently under a multi-year treatment plan. All grazing allotment agreements for the Planning Area would continue to address weed control by chemical treatment and adjusting livestock use. | Prevention on roads, trails, waterways, recreation sites, and disturbed sites due to project implementation. Prevention and control in special designation areas and weed management areas are also high priority. | Prevention on roads, trails, waterways, recreation sites, disturbed sites due to project implementation, and special designation areas. Prevention and control in special designation areas would be a moderate priority. | Prevention on roads, trails, waterways, recreation sites, and disturbed sites due to project implementation. Prevention and control in special designation areas, weed management areas, areas under a multi-year treatment plan would be a moderate priority. |

***Noxious Weeds - Aerial Spraying***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Aerial spraying of herbicides would not take place within 200 feet of streams or wetlands. | Procedures described in the Record of Decision for Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement (U. S. Department of Interior, Bureau of Land Management, June 2007) would be used. All vegetation projects must be consistent with the Standard Operating Procedures and mitigation measures identified in this Record of Decision. | Aerial application of herbicides and pesticides would not occur. | Aerial spraying of herbicides would not take place when eye-level winds are greater than 6 miles per hour or within 100 feet of streams or wetlands. |

**Table 2-23**
**Comparison of Alternatives**

***Noxious Weeds - Special Status Plants***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| No related action. | BLM, county, and contractor personnel participating in weed treatment activities would be provided with training to identify special status plants and maps of special status plant populations associated with weed treatment areas. | BLM weed personnel would be provided with maps of special status plant populations associated with weed treatment areas. | Same as Alternative B. |

***Noxious Weeds - Public Outreach***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| No related action. | Outreach/education on noxious weeds would be provided to the public at campgrounds and trailheads. | Same as Alternative B. | Outreach/education on noxious weeds would be provided to the public at campgrounds, trailheads, to specific user groups, at schools, fairs, and community events. |

***ISSUE 2: WILDLIFE, WILDLIFE HABITAT, and FISH***

**Goals**

- Conserve, enhance, restore, mitigate, or contribute to the recovery of threatened, endangered, or candidate plant or animal species.
- Conserve or enhance habitat or mitigate negative effects to habitat of BLM sensitive plant and animal species to prevent the federal listing of these species.
- Conserve special-status species and habitats across the landscape through collaboration and cooperation.
- Provide a variety of well-distributed diverse plant communities to support a diversity of habitats.
- Conserve, enhance, restore, or mitigate areas of important wildlife habitat such as rare or limited seasonal habitats, corridors, blocks of intact functional habitat across the landscape, areas of low road-density, foraging areas, and riparian areas.
- Conserve, enhance or restore special habitat features or mitigate/minimize impacts to special habitat features including, but not limited to caves, cliffs, riparian areas, wetlands, snags, and down woody material.

**Management Common to All Alternatives**

- All alternatives would emphasize actions that would promote conservation of special status and priority wildlife species and the ecosystems on which they depend. All alternatives would emphasize maintaining and supporting healthy, productive, and diverse populations and communities of native plants and animals (including big game species such as deer, elk, and bighorn sheep) appropriate to soil, climate, and landform.
- Habitat improvement projects would be implemented where necessary to restore wildlife habitat and/or to improve unsatisfactory or declining wildlife habitat.
- Important blocks of hiding, security, and thermal cover for big game would be considered during project planning.

**Table 2-23**
**Comparison of Alternatives**

***WILDLIFE, WILDLIFE HABITAT, and FISH – continued***

- All new fences would be built to standard BLM wildlife specifications (USDI – BLM. 1989b. Bureau of Land Management Fencing Handbook, H-1741-1) to allow wildlife passage with the exception of fences built specifically to keep native ungulates out of an area unless site specific analysis indicates other specifications are necessary.
- Consistent with the requirements of the Endangered Species Act (1973) and BLM policy, all alternatives would ensure that actions are consistent with the conservation needs of special status species. The BLM would seek opportunities to conserve and improve special status species habitats and habitats for native plants and wildlife in project level planning and in other BLM authorized, funded, or approved activities.
- BLM would cooperate and collaborate with federal, tribal, and state wildlife management agencies as well as private landowners to improve habitat for wildlife and special status plants.
- Timing restrictions may be used in special status species habitat. Human activities that disrupt special status species habitats during their seasons of use, particularly during the breeding and winter seasons would be avoided or minimized.
- BLM would manage in a manner consistent with current and future restoration/conservation and recovery plans/conservation agreements (westslope and Yellowstone cutthroat trout, Arctic grayling, and prairie dog) for sensitive terrestrial and aquatic species.
- Sage grouse management activities would be designed and implemented to be consistent with adopted conservation strategies such as The National and Montana Management Plan and Conservation Strategies for Sage Grouse in Montana (USDI-BLM 2004) and current, accepted science.
- Vegetation altering activities could occur in sage grouse habitat where it does not result in long-term loss of habitats or contribute to the need to list. Sufficient sagebrush densities and cover would be retained in sage grouse habitat.

**Management Common to Action Alternatives (B, C, and D)**

- All federally listed and BLM sensitive species and their habitats would be considered priority species and habitats. Additional priority wildlife species would be big game (such as elk, bighorn sheep, deer, and antelope) and migratory birds listed by USFWS and Level 1 and Level 2 species listed under the Montana Bird Conservation Plan (Partners in Flight 2000). Tier I and Tier II habitat and species from Montana's Comprehensive Fish and Wildlife Conservation Strategy (MFWP 2005b) would also be considered priority species and habitats. Priority habitats would include habitat for all special status species as well as riparian areas, dry savannah forest, special habitats including caves, cliffs, snags and down woody material, sagebrush, bitterbrush communities and mountain mahogany communities.
- Management techniques, including but not limited to prescribed and managed wildland fire, prescriptive livestock grazing, planting, exclusion to intense disturbance, timber harvest and other mechanical methods would be used to restore, maintain or improve the desired ecological conditions of vegetation communities for the purpose of improving forage, nesting, breeding, and security habitat, hiding cover and travel corridors for a wide diversity of terrestrial and aquatic species.
- The BLM would emphasize providing habitat of sufficient quantity and quality, including connectivity and wildlife movement corridors, habitat complexity, forest openings, edges, and ecotones, to enhance biological diversity and provide quality, sustainable habitat for native wildlife species.
- BLM would maintain suitable habitat conditions and minimize fragmentation in linkage corridors among habitats occupied by special status species.
- BLM would coordinate with MFWP to determine whether habitat and other conditions exist that would allow successful reintroduction of locally or regionally absent species, such as westslope cutthroat trout, sage grouse, beaver, bighorn sheep, and prairie dogs.

**Table 2-23**
**Comparison of Alternatives**

- To the extent possible, BLM would: maintain large patches of high quality sagebrush in occupied or historic sage grouse habitat (as mapped by MFWP); maintain connections between sagebrush habitats and enlarge the size of sagebrush patches in occupied or historic sage grouse habitat.
- BLM would close rock climbing in areas with active raptor nests and would educate the public about the importance of avoiding such locations.
- Seasonal timing restrictions on projects that cause disturbance would be applied where they are needed to minimize the impacts of human activities on important seasonal wildlife habitat. The major types of seasonal wildlife habitat and the time periods which restrictions may be needed are: big game winter and spring range (12/1 to 5/30), big game calving range/habitat (5/1 to 6/30), mountain goat nursery areas (5/1 to 7/15), mountain goat breeding areas (11/1 to 12/31), mountain goat winter range (10/15 to 5/15), grizzly bear spring and summer range (4/1 to 9/1), and grizzly bear denning habitat (10/1 to 4/30).
- One objective under all action alternatives would be to maintain functional blocks of security habitat for big game species across the landscape. Where minimum-size blocks of security habitat (250 acres), as defined by Hillis et al. (1991), are located, they would be retained in a suitable condition during project planning and implementation. Protection of larger blocks of security habitat would also be addressed during project or watershed level planning. Where security habitat is limited or fragmented across the landscape, the BLM would emphasize improving habitat through vegetation treatments and road closures (including seasonal closures) to increase security habitat for big game species.
- At the project level, dead and down woody material would be retained in amounts that are within the range of natural variability for the plant community, to the extent compatible with reforestation objectives, fire hazard reduction standards, and public safety.
- In grasslands and shrublands undergoing vegetation treatments such as the removal of conifer encroachment through mechanical thinning or prescribed burning, all trees and snags with characteristics of old forest structure would be left standing to the extent practicable.
- All action alternatives would emphasize protecting and restoring special habitat components or features that contribute to the productivity of bat species.
- Caves and abandoned mines would be surveyed and assessed for bat use. BLM would determine the need for closures or seasonal closures for activities affecting caves and abandoned mines. Hibernacula closure dates would be approximately 10/15 to 5/1 and maternity closure dates would be approximately 4/15 to 9/30.
- Bat gates or other suitable measures would be used to protect bat habitat when bat use of caves or abandoned mines is determined. Public health and safety would take precedence over protection of bat habitat if hazardous mine openings cannot be remediated with installation of bat gates.
- BLM would comply with the standards and guidelines in the Canada Lynx Conservation Assessment and Strategy (Appendix G).
- BLM would develop and implement human food storage regulations and guidelines in grizzly bear distribution zones in coordination with MFWP and other agencies.
- All action alternatives would emphasize maintaining diverse, healthy, productive, well-distributed aquatic habitats and communities to increase populations of native fish and other aquatic species.
- The BLM would emphasize maintaining and/or restoring the structure, composition, and function of aquatic ecosystems to support a diversity of aquatic plant and animal species and emphasize hydrologic connectivity within watersheds to maintain and/or restore habitat and connectivity needs for populations of aquatic dependent species.
- The BLM would restore and/or maintain riparian structure, composition, and processes, including physical integrity of riparian ecosystems, amount and distribution of woody debris to sustain physical and biological complexity, adequate summer and winter thermal regulation, water quality and hydrologic processes, distribution and diversity of riparian vegetative communities and source habitats for riparian dependent species.

**Table 2-23**
**Comparison of Alternatives**

***WILDLIFE, WILDLIFE HABITAT, and FISH – continued***

**Management Common to Action Alternatives (B, C, and D) - continued**

- BLM would opportunistically enhance or restore populations of and habitat for westslope and Yellowstone cutthroat trout and Arctic grayling.
- In select areas identified for native fish restoration, BLM would collaborate with MFWP to remove non-native fish species that out-compete or hybridize with native cutthroat trout.
- Transportation system effects on fisheries resources would be reduced. To the extent possible, roads would be located, designed and maintained to reduce sedimentation, identify and remove unnatural barriers, eliminate fish passage barriers (when desired), and restore or maintain riparian vegetation.

***Wildlife - Livestock Grazing Fences as Barriers***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| No related action. | Fences identified as barriers to wildlife movement would be considered for removal or reconstruction on a case by case basis, to follow BLM fence specifications for wildlife. | Fences identified as barriers to wildlife movement would be removed or reconstructed to follow BLM fence specifications for wildlife. | Same as Alternative B. |

***Wildlife - Restoration/Fire Rehabilitation***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| No related action. | For habitat enhancement, fire rehabilitation and other restoration projects, a variety of techniques would be considered to protect plantings, and seedlings from the effects of wildlife and domestic grazing including rest, fencing, netting, and wildlife repellants. | For habitat enhancement, fire rehabilitation and other restoration projects, plantings and seedlings would be protected from the effects of wildlife and domestic grazing including rest, fencing, netting, and wildlife repellants. | Same as Alternative B. |

***Wildlife Objectives - Big Game and Roads***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Where applicable, the elk management guidelines contained in the Montana Cooperative Elk-logging Study (USDA-FS 1982) will be followed. The existing road network generally will remain open for public use. | There would be no net increase in permanent roads built in areas where open road densities are 1 mi/mi$^2$ or less in big game winter and calving ranges unless not possible due to rights-of-way, leases or permits. All practicable measures would be taken to assure that important habitats with low road densities remain in that condition. | There would be no net increase in permanent roads built in areas where open road densities are 1.5 mi/mi$^2$ or less in big game winter and calving ranges unless not possible due to rights-of-way, leases or permits. All practicable measures would be taken to assure that important habitats with low road densities remain in that condition. | No new permanent roads would be allowed in areas where open road densities are 0.5 mi/mi$^2$ or less in big game winter and calving ranges unless not possible due to rights-of-way, leases or permits. All practicable measures would be taken to assure that important habitats with low road densities remain in that condition. |

**Table 2-23**
**Comparison of Alternatives**

| | | | |
|---|---|---|---|
| | BLM would manage to reduce open road densities in big game winter and calving ranges where they exceed 1 mi/mi$^2$. | BLM would manage to reduce open road densities in big game winter and calving ranges where they exceed 0.5 mi/mi$^2$. | BLM would manage to reduce open road densities in big game winter and calving ranges where they exceed 1.5 mi/mi$^2$. |
| ***Wildlife Objectives - Grizzly Bears (Special Status Species) and Roads*** | | | |
| **Alternative A - No Action** | **Alternative B - Preferred** | **Alternative C** | **Alternative D** |
| No related action. | There would be no net increase in permanent roads built in areas where open road densities are 1 mi/mi$^2$ or less within the current distribution of grizzly bear unless not possible due to rights-of-way, leases or permits. All practicable measures would be taken to assure that important habitats with low road densities remain in that condition. BLM would manage to reduce open road densities within the current distribution of grizzly bear where they exceed 1 mi/mi$^2$. | There would be no net increase in permanent roads built in areas where open road densities are 1.5 mi/mi$^2$ or less within the current distribution of grizzly bear unless not possible due to rights-of-way, leases or permits. All practicable measures would be taken to assure that important habitats with low road densities remain in that condition. BLM would manage to reduce open road densities within the current distribution of grizzly bear where they exceed 0.5 mi/mi$^2$. | Same as Alternative B. |
| ***Wildlife Objectives – Big Game Security Cover*** | | | |
| **Alternative A - No Action** | **Alternative B - Preferred** | **Alternative C** | **Alternative D** |
| Elk management guidelines in the Montana Cooperative Elk-Logging Study (Lyon et al. 1982) would be followed including: managing public vehicle access to maintain habitat effectiveness of security cover and key seasonal habitat for deer and elk; maintaining adequate untreated peripheral zones around important moist sites; maintaining adequate thermal and security cover on deer and elk habitat, particularly in timber stands adjacent to primary winter foraging areas; ensuring slash depth in clear cuts does not exceed 1.5 feet and generally discouraging thinning immediately adjacent to clear cuts. | Where minimum-size blocks of security habitat (250 acres), as defined by Hillis et al. (1991), are located, they would be retained in a suitable condition during project planning and implementation. Protection of larger blocks of security habitat would also be addressed during project or watershed level planning. Where security habitat is limited or fragmented across the landscape, the BLM would emphasize improving habitat through vegetation treatments and road closures (including seasonal closures) to increase security habitat for big game species. | Same as Alternative B. | Same as Alternative B. |

**Table 2-23**
**Comparison of Alternatives**

| ***Wildlife - Mountain Mahogany and Bitterbrush Management*** | | | |
|---|---|---|---|
| **Alternative A - No Action** | **Alternative B - Preferred** | **Alternative C** | **Alternative D** |
| No related action. | BLM would enhance and improve big game winter range through protection and restoration of mountain mahogany stands where conifers have become established. Detrimental effects to mountain mahogany stands would be avoided with projects in big game winter range whenever possible. When detrimental effects are unavoidable, loss of mountain mahogany would be minimized. BLM would also proactively restore the distribution and vigor of bitterbrush stands through vegetative treatments designed to reduce competing plants; and create a variety of bitterbrush age classes and conditions conducive to bitterbrush regeneration. | BLM would allow natural processes and continued fire suppression to determine the structure and composition of mountain mahogany stands where conifers have become established. Mountain mahogany stands would be restored or enhanced opportunistically through other higher priority projects. Bitterbrush would be protected or restored opportunistically through other higher priority projects. | Same as Alternative B. |
| ***Wildlife - Snag Management*** | | | |
| **Alternative A - No Action** | **Alternative B - Preferred** | **Alternative C** | **Alternative D** |
| In concert with the timber management program, a snag management program would be implemented to enhance habitat for cavity-nesting birds. | To determine the "range of natural conditions" for snag densities, BLM would follow the "Northern Region Snag Management Protocol", Jan. 2000, USDA FS Northern Region, until more current information is available. | Same as Alternative B. | Same as Alternative A. |
| No related Action | Prescribed fire, mechanical treatments, inoculation, or other appropriate methods would be used to create snags and down woody material where deficient in appropriate vegetation types across the landscape. | Snags and down woody material would be created opportunistically through other project work such as fuels reduction or ecosystem restoration. The focus would be on snag and down wood protection rather than on actively creating these features. | Same as Alternative A. |

**Table 2-23**
**Comparison of Alternatives**

| ***Wildlife - Raptors/Special Status Species*** | | | |
|---|---|---|---|
| **Alternative A - No Action** | **Alternative B - Preferred** | **Alternative C** | **Alternative D** |
| No related action. | Noise disturbance/management activities would be avoided or minimized within 0.5 mile of occupied raptor nests during the nesting and brood rearing period. | Noise disturbance/management activities would be avoided or minimized within 1 mile of raptor nests during the nesting and brood rearing period. | Noise disturbance/management activities would be avoided or minimized within 0.25 mile of raptor nests during the nesting and brood rearing period. |
| No related action | Unoccupied raptor nests (on cliffs, rocky outcrops or in trees) would be protected from removal or destruction for 5 years, or the period a known preferred prey species fluctuates from population highs to lows. The nest would not have to be retained if it is physically damaged past the point of repair by raptors. In forested habitat types, a 0.25 mile buffer of suitable habitat would be maintained around unoccupied nests for 5 years. | Unoccupied raptor nests (on cliffs, rocky outcrops or in trees) would be protected from removal or destruction for 7 years, or the period a known preferred prey species fluctuates from population highs to lows. The nest would not have to be retained if it is physically damaged past the point of repair by raptors. In forested habitat types, a 0.5 mile buffer of suitable habitat would be maintained around unoccupied nests for 7 years. | Unoccupied raptor nests (on cliffs, rocky outcrops or in trees) would be protected from removal or destruction for 3 years, or the period a known preferred prey species fluctuates from population highs to lows. The nest would not have to be retained if it is physically damaged past the point of repair by raptors. In forested habitat types, a 0.25 mile buffer of suitable habitat would be maintained around unoccupied nests for 3 years. |
| ***Wildlife - Bald Eagle (Special Status Species)*** | | | |
| **Alternative A - No Action** | **Alternative B - Preferred** | **Alternative C** | **Alternative D** |
| No related action. | Bald eagle nesting and roosting habitats would be actively protected from loss due to fire, insect, or disease by reducing vegetation competition and encroachment in these habitats. | Same as Alternative B. | Same as Alternative A. |
| ***Wildlife – Bats (Special Status Species)*** | | | |
| **Alternative A - No Action** | **Alternative B - Preferred** | **Alternative C** | **Alternative D** |
| No related action. | Clearing of vegetation, except noxious weeds, would not be allowed within 250 feet of the entrance of caves and abandoned mines with populations of bats except for public safety. Vegetation could be removed if necessary when installing bat gates, or when it becomes an obstruction to bat movement. | Same as Alternative B. | Same as Alternative A. |

**Table 2-23**
**Comparison of Alternatives**

| | | | |
|---|---|---|---|
| ***Wildlife –Westslope Cutthroat Trout (Special Status Species)*** | | | |
| **Alternative A - No Action** | **Alternative B - Preferred** | **Alternative C** | **Alternative D** |
| No related specific action. | Genetically pure and slightly hybridized (less than 20 percent hybridization) westslope cutthroat trout populations would be managed by maintaining or restoring high-quality habitats and by expanding populations. | All westslope cutthroat trout populations, regardless of hybridization, would be protected by maintaining high-quality habitats and by expanding populations. | Genetically pure and slightly hybridized (less than 10 percent hybridization) westslope cutthroat trout populations would be protected by maintaining or restoring high-quality habitats and by expanding populations. |
| ***Wildlife –Non-Native Aquatic Species*** | | | |
| **Alternative A - No Action** | **Alternative B - Preferred** | **Alternative C** | **Alternative D** |
| No related action. | BLM would work with MFWP to remove brook trout and other non-native aquatic species that out-compete or breed with westslope cutthroat trout through the use of electroshocking or other physical or chemical means. | Same as Alternative B. | Same as Alternative A. |
| ***Wildlife –Non-Native Invasive Species*** | | | |
| **Alternative A - No Action** | **Alternative B - Preferred** | **Alternative C** | **Alternative D** |
| No related action. | To prevent spread of non-native, invasive aquatic species, BLM would post educational signs about waterborne invasive species at all BLM boat ramps. | Same as Alternative B. | To prevent spread of non-native, invasive aquatic species, BLM would install boat wash stations at all major BLM boating access sites. |
| ***ISSUE 3: TRAVEL MANAGEMENT*** | | | |
| ***Field Office-wide*** | | | |
| **Goals**<br>• Provide a balanced approach to travel management that provides a sustained flow of local economic benefits, minimizes or mitigates user conflict, safety concerns, and resource impacts while taking into consideration the unique attributes and values of the various travel management Planning Areas.<br>• Maintain facilities, roads, and trails to provide for public and/or administrative use and safety while mitigating impacts to resources.<br>**Management Common to All Alternatives**<br>• Travel management would be conducted in a manner that would meet, or move toward meeting, Land Health Standards.<br>• The 2003 Statewide OHV ROD and Plan Amendment would be followed.<br>• Previous travel planning decisions made for areas with existing travel plans (Elkhorn Mountains, Clancy-Unionville, Whitetail-Pipestone, and Sleeping Giant and several small “sub-planning” areas) would be brought forward in this RMP revision with no proposed changes. | | | |

**Table 2-23**
**Comparison of Alternatives**

- BLM would provide for interagency travel management consistency and route connectivity with adjoining public lands.
- Designated routes would be mapped and signed as open or open with restrictions.
- BLM would continue to participate with the Southwest Montana Interagency Travel Management Committee, maintaining map and sign consistency, and seasonal restrictions.
- BLM would continue to partner with the State Trails Program, seeking opportunities to improve existing as well as future trails and facilities.
- Variances to travel plan designations may be issued on a case-by-case basis to conduct essential agency administrative actions and site-specific approved uses such as casual use mineral exploration.
- Wheeled motorized vehicle travel would be allowed for any military, fire, search and rescue, or law enforcement vehicle for emergency operations. Temporary routes could be constructed where needed and where other routes are not available under approved travel management plans. Construction of such routes would be to minimal standards, adhering to BMPs.
- BLM would minimize establishing travel routes in areas identified at risk for noxious weed infestations.
- In areas with sensitive soils, BLM would minimize establishing new routes and would consider closure, restriction, mitigation, or administrative management of existing travel routes.
- Travel planning analysis would be conducted on those routes documented during the inventory period (up to May 2005).
- Short, site-specific sections of route/trail re-alignment, or reconstruction would continue to be implemented as needed to minimize resource damage and/or provide minor reroutes around private property.

**Management Common to Action Alternatives (B, C, and D)**

- BLM objective in route-specific travel planning within individual TPAs would be to use a systematic process that considers the unique resource issues and social environments of each TPA.
- Travel Plan Areas not analyzed for route-specific management during this RMP revision would be initiated within five years of the completed RMP revision.
- BLM would cooperate with MFWP, adjusting seasonal travel restrictions in accordance with big game hunting season extensions.
- Gates or other barriers would be used as necessary to prevent access on roads and trails closed yearlong to the public.
- Travel route densities would conform with the management prescriptions in the wildlife section of this RMP.
- Loop-road connections would be established, where appropriate, to enhance public access and enjoyment.
- The BLM would emphasize management of the transportation system to reduce impacts to natural resources from authorized roads and trails. The BLM would also stress closing and restoring unauthorized user created roads and trails to prevent resource damage. Ecologically sensitive areas within 300 feet of roads and trails could be closed to dispersed camping if resource damage is found to be occurring in these areas.
- Snowmobile use would be subject to restrictions outlined in specific travel plans. It is the rider's responsibility to avoid locations where wind or topographic conditions may have reduced snow depth and created situations where damage to vegetation or soils could occur, or where vegetation is taller than the protective snow cover. Ecologically sensitive areas could be closed to snowmobiling if resource damage caused or exacerbated by snowmobile activity is found to be occurring in these areas.

**Table 2-23**
**Comparison of Alternatives**

***Travel Management – Field Office-wide Area Designations***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Areas Designations of "Open", "Closed", and "Limited" would be:<br><br>Wheeled Vehicles<br><br>Open – 4,367 acres<br>Closed – 31,500 acres<br>Limited – 271,442 acres<br><br>Snowmobiles<br><br>Open – 143,206 acres<br>Closed – 27,065 acres<br>Limited – 137,038 acres | Areas Designations of "Open", "Closed", and "Limited" would be:<br><br>Wheeled Vehicles<br><br>Open – 283 acres<br>Closed – 31,500 acres<br>Limited – 275,526 acres<br><br>Snowmobiles<br><br>Open – 112,682 acres<br>Closed – 54,706 acres<br>Limited – 139,921 acres | Same as Alternative B for wheeled vehicles.<br><br>Snowmobiles<br><br>Open – 26,148 acres<br>Closed – 65,270 acres<br>Limited – 215,891 acres | Same as Alternative B for wheeled vehicles.<br><br>Snowmobiles<br><br>Open – 139,138 acres<br>Closed – 31,282 acres<br>Limited – 136,889 acres |

***Travel Management – Competitive Motorized Events***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Applications for competitive and non competitive organized motorized events would continue to be evaluated on a case by case basis. | Organized competitive and noncompetitive motorized events would be considered and evaluated on a case-by-case basis for the Pipestone area only (existing management). Noncompetitive motorized events would not be allowed outside Pipestone. However, competitive motorized events (timed /speed based) proposed on BLM lands outside Pipestone would be considered, but only if held in conjunction with use of adjacent lands (public or private). | Competitive and organized motorized events would not be allowed. Unless otherwise managed, snowmobile use would be restricted to designated routes only (open or open/restricted), between December 1st and May 15th, snow conditions permitting. | Management for organized motorized events (competitive and non-competitive) would be the same as for Alternative B. |

***Travel Management – Field Office-wide Snowmobile Use***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Existing management varies, and includes: unrestricted area cross-country travel (conditions permitting), seasonally restricted area cross-country travel, travel on all wheeled designated routes (12/1-5/15), and snowmobile use only routes. | With some exceptions (see site specific travel plan alternatives), cross-country snowmobile use would be allowed, as well as travel on all existing routes (conditions permitting). | Unless otherwise managed, snowmobile use would be restricted to designated routes only (open or open/restricted), during the season of use, 12/1-5/15, snow conditions permitting. | Same as Alternative B. |

**Table 2-23**
**Comparison of Alternatives**

***Travel Management – Travel Route Easements***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Easements would be pursued as needed for new route construction. | BLM would actively seek easements in order to maintain current access for popularly traveled routes, as well as seek additional site-specific opportunities as needed. | BLM would seek public access easements as needed for new road or trail construction. | BLM would seek public access easements for all locations where BLM routes are accessed either from, or cross private property. |

***Travel Management – Cattle Guards/Gates***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Cattle guards and gates needed to facilitate public travel would be installed on an as needed basis for newly constructed roads/trails. | BLM would replace barbed wire gates (and similar closures) with cattle guards and/or easily operated metal gates wherever problems are known to occur. | Same as Alternative A. | BLM would replace barbed wire gates (and similar closures) with cattle guards and/or easily operated metal gates wherever they currently exist. |

***Transportation/Facilities***

**Management Common to Action Alternatives (B, C, and D)**

- Roads would be built to the minimum standard necessary that allows reasonable access and has the least impact on resource values.
- If an existing road is substantially contributing to Land Health Standards not being met, the road would be considered for redesign, closure, or decommissioning to minimize the adverse impacts.

**Management Common to All Alternatives**

- Transportation and road management activity would meet, or move toward meeting Land Health Standards.
- Comprehensive assessments would be conducted for all maintained roads and facilities and maintenance actions would be implemented as needed.
- New permanent roads and trails would be constructed subject to NEPA and approved engineering standards. Consideration would be given to use demands, location, safety, and resource constraints when determining the level of road necessary, in accordance with Manual Section 9113.
- Roads and trails would be maintained in accordance with Travel Management Plan guidance and BLM policy. Roads would be assigned maintenance levels and managed in accordance with these levels and in consideration of resource issues. All roads and trails would be maintained in accordance with standards and guidelines in BLM Handbook 9113-2 and Manual Section 9114. Roads and trails would be inspected on an established schedule in accordance with BLM's Condition Assessment guidance.

**Table 2-23**
**Comparison of Alternatives**

***Transportation/Facilities - Road Design***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| No related management. | Road designs would include at a minimum:<br>• Minimizing road and landing locations in Riparian Management Zones;<br>• Minimizing sediment delivery to streams from road surfaces;<br>• Outsloping roadway surfaces where possible, except in cases where outsloping would increase sediment delivery to streams or where outsloping is infeasible or unsafe;<br>• Routing road drainage away from potentially unstable stream channels, fills and hillslopes;<br>• Minimizing disruption of natural hydrologic flow paths;<br>• Minimizing sidecasting of soil or snow. | Same as Alternative B with the additional condition that stream crossings would be designed to accommodate 100-year storm events with associated sediment and debris. | Road designs would include at a minimum:<br>• Minimizing road and landing locations in Streamside Management Zones;<br>• Minimizing sediment delivery to streams from road surfaces;<br>• Outsloping roadway surfaces where possible, except in cases where outsloping would increase sediment delivery to streams or where outsloping is infeasible or unsafe;<br>• Routing road drainage away from potentially unstable stream channels, fills, and hillslopes. |

***Transportation/Facilities - Road Design and Maintenance***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| BLM would use Water Quality Best Management Practices for Montana Forests during road construction and maintenance. | Roads would be designed and maintained in a manner that provides for water quality protection by controlling placement of fill material, keeping drainage facilities open, installing and maintaining appropriately-sized culverts at stream crossings, and by repairing ruts and failures to reduce erosion and sedimentation of aquatic habitats. | Roads would be designed and maintained in a manner that provides for water quality protection by controlling placement of fill material, keeping drainage facilities open, installing and maintaining stream crossings capable of accommodating 100-year storm events including associated sediment and debris, and by repairing ruts and failures to reduce erosion and sedimentation of aquatic habitats. | Roads would be designed and maintained in a manner that provides for water quality protection by controlling placement of fill material, keeping drainage facilities open, installing and maintaining appropriately-sized culverts at stream crossings, and by repairing ruts and failures to reduce erosion and sedimentation of aquatic habitats. |

**Table 2-23**
**Comparison of Alternatives**

## *ISSUE 4: RECREATION*

### Goals

- Provide a diverse array of recreational opportunities while maintaining healthy public land resources.
- Establish, manage, and maintain quality recreation sites and facilities to meet a broad range of public needs subject to resource constraints.
- Manage commercial, competitive, or special events with special recreation permits that eliminate or mitigate impacts to resources and conflicts with other users.
- Manage recreation opportunities to provide a sustained flow of local economic benefits and protect non-market economic values.
- "Leave No Trace" and "Tread Lightly" practices would be promoted.
- BLM would support events that emphasize collaborative outreach and public awareness.
- BLM would support and utilize volunteers.

### Management Common to All Alternatives

- BLM would continue to provide a diverse range of quality recreation opportunities and experiences commensurate with public demands, resource considerations, management capabilities, and existing program guidance.
- Comparable, cost effective and value based fee systems would be established for services and facilities provided to public users in accordance with the Butte Field Office Recreation Fee Area (MT-02) Business Plan, BLM directives and the Federal Lands Recreation Enhancement Act. This Business Plan would be updated every five years.
- There are no known significant caves or karsts in the Decision Area. Should these resources be discovered, BLM would develop management plans appropriate for the specific resource in accordance with Bureau directives.
- Recreation users would be limited to 14-day camping stays with the exceptions presented under Recreation Management – Management Common to All Alternatives.
- Personal property of recreational users could not be unattended for more than 24 hours at recreation sites or for more than 72 hours on other BLM lands.
- BLM would establish and maintain information kiosks with site maps, brochures, interpretive and educational information, important contacts, and site regulations at recreation sites.
- BLM would continue to conduct periodic accessibility, safety, and condition assessments in accordance with Bureau policy at developed recreation sites. Prioritize available funds to resolve deferred and corrective maintenance needs.
- BLM would conduct annual evaluations of all fee sites that address project needs, support equipment, visitor services, public comments, administrative needs, fees, site regulations, and conflict concerns.
- Working relationships with tourism organizations, recreation interest groups, and local/state/other federal governments would be maintained and expanded to enhance visitor services, management efficiencies, and recreation opportunities.
- Partnership agreements that are mutually beneficial to BLM and the public would be established and maintained to enhance comprehensive planning, collaborative management, and collective funding.

**Table 2-23**
**Comparison of Alternatives**

***RECREATION - continued***

**Management Common to All Alternatives - continued**

- BLM would develop and strive to maintain an agreement with MFWP that would establish partnership efforts and responsibilities to collectively manage the Black and White Sandy sites on Hauser Lake.
- SRMAs would be given management priority to provide quality recreation opportunities and visitor experiences. All remaining lands would be managed as an Extensive Recreation Management Area (ERMA). This area would generally be given less priority in terms of on-the-ground management, improvements, and facility maintenance.
- BLM would pursue opportunities to expand day-use parking capacities on Holter Lake in cooperation with the Missouri/Madison Comprehensive Recreation Plan.
- Organized competitive and non-competitive motorized events would be considered and evaluated on a case-by-case basis for the Pipestone area only (existing management). Non-competitive motorized events would not be allowed outside Pipestone. However, competitive motorized events (timed/speed based) proposed on BLM lands outside Pipestone would be considered, but only if held in conjunction with adjacent lands (public or private). New permits would not be authorized that directly conflict with permitted uses. Existing permittees would be given preference.

**Management Common to Action Alternatives (B, C, and D)**

- BLM would establish designated boat-in camp sites along the shoreline of Holter Lake and consider a similar designation effort for the Hauser Lake shoreline should resource concerns warrant.
- In accordance with policy guidance (IM No. 2004-150), a greater priority would be placed on extending appropriate, reoccurring permits from five years to 10 years.
- New special recreation use permits would be analyzed and mitigated to meet management objectives.
- BLM would coordinate with MFWP to manage appropriate uses at BLM launch sites as necessary to ensure quality recreation opportunities and experiences on State waters and affected BLM lands.
- New sites would be developed commensurate with public demand, resource constraints, and management capabilities. Priority would be given to new sites that have partnership funding strategies and are consistent with established ROS and SRMA management guidelines.
- If an existing developed recreation site significantly contributes to Land Health Standards not being met, the impacts from the site would be minimized to the extent possible.
- All new recreation sites would be designed, constructed, and managed to meet, or move toward meeting, Land Health Standards.

***Recreation – Permits***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| No fees would be charged for commercial fishing and floating outfitters using developed BLM river access sites. | Day-use Special Recreation Permits would be issued for commercial fishing and floating uses at BLM river access sites. Outfitters would be annually billed an **advance flat fee** (currently | Day-use Special Recreation Permits would be issued for commercial fishing and floating outfitters using developed BLM river access sites. Fees would be based on actual use reports and estab- | Fees would be postponed for commercial fishing and floating outfitters using developed BLM river access sites until a multi-agency statewide fee system is established. Under this system, BLM |

**Table 2-23**
**Comparison of Alternatives**

| | | | |
|---|---|---|---|
| | $90.00) established by the Director based on the Implicit Price Deflator Index. Long-term BLM would continue to coordinate with MFWP to enhance river/corridor land management and to possibly develop a multi-agency statewide fee system for the commercial uses of river access sites. | lished BLM policies. | would receive a portion of collections based on a percentage of total sites under the statewide system. |
| ***Recreation – 14-Day Camping Variances*** | | | |
| **Alternative A - No Action** | **Alternative B - Preferred** | **Alternative C** | **Alternative D** |
| Variances (extensions) to the 14-day camping limit would be considered on a case-by-case basis subject to the following considerations: resource impacts, social conflicts, sanitation concerns, no livestock or commercial activities would be involved. | Variances to the 14-day camping limit during the hunting season would be considered on a case-by-case basis subject to the following considerations: resource impacts, social conflicts, and sanitation concerns, no livestock, or commercial activities would be involved. Preference will be given to developed recreation sites since they provide hardened camping units, toilet facilities, and good access during this low use season. | No variances to 14-day camping limits would be allowed. | Same as Alternative B. |
| ***Recreation – Permits*** | | | |
| **Alternative A - No Action** | **Alternative B - Preferred** | **Alternative C** | **Alternative D** |
| Authorization of commercial camping activity would be considered throughout the Field Office on a case-by-case basis subject to resource constraints, management capabilities, social conflicts, and public health and safety concerns. | Commercial camping permits within developed fee sites would not be allowed during the fee season to reduce user conflicts and resource impacts (Memorial Day to Labor Day). | Same as Alternative B. | Same as Alternative A. |

**Table 2-23**
**Comparison of Alternatives**

***Recreation – Permits***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Permit requests by outfitter and guide hunters would be considered on a case-by-case basis throughout the Field Office, subject to environmental, social, and public health and safety concerns. | Special recreation permits would be limited to day-use activities during the hunting season with the exception that camping uses would only be considered within developed recreation sites during the non-fee season. | Special recreation use permits during the hunting season would be limited to day-use activities only. | Same as Alternative A. |

***Recreation – Hauser Lake Boat-in Camping***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Boat-in camping would be allowed along the entire BLM shoreline of Hauser and Holter Lakes subject to current regulations. | Boat-in camping at dispersed sites (excludes developed sites) on BLM lands along the Holter Lake shoreline would be limited to designated sites only. Site availability would be determined through a field evaluation by an interdisciplinary team. Suitable sites where impacts to other important resources are acceptable would be designated, signed, and available to the public on a first-come, first-served basis. A similar management system should be considered and implemented along Hauser Lake should conditions warrant. | The entire BLM shoreline on Hauser and Holter Lakes excluding developed sites would be closed to camping. | Same as Alternative A. |

***Recreation – Bear/Human Interactions***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| No related action. | Human food storage regulations would be developed and implemented for all recreation sites with high potential and/or known encounters between people and bears. | Same as Alternative B. | Same as Alternative A. |

**Table 2-23**
**Comparison of Alternatives**

***Recreation – Recreation Opportunity Spectrum***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| No ROS classifications would be established to guide the management of appropriate settings and visitor opportunity experiences. | ROS classifications would be:<br>• Semi-Primitive Non-Motorized – 36,800 acres<br>• Semi-Primitive Motorized – 71,800 acres<br>• Roaded Natural – 171,100 acres<br>• Roaded Modified – 16,600 acres<br>• Rural – 11,000 acres | ROS classifications would be:<br>• Semi-Primitive Non-Motorized – 63,700 acres<br>• Semi-Primitive Motorized – 66,900 acres<br>• Roaded Natural – 158,100 acres<br>• Roaded Modified – 15,900 acres<br>• Rural – 2,700 acres | ROS classifications would be:<br>• Semi-Primitive Non-Motorized – 30,000 acres<br>• Semi-Primitive Motorized – 37,600 acres<br>• Roaded Natural – 186,100 acres<br>• Roaded Modified – 19,600 acres<br>• Rural – 34,000 acres |

***Recreation – Special Recreation Management Areas (SRMAs)***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Recreation management would continue to be prioritized in the following five areas: Holter Lake/Sleeping Giant, Lewis & Clark National Trail, Upper Big Hole River, Humbug Spires, and Scratchgravel Hills. | Recreation management would be prioritized in the following nine areas: Lower Holter Lake/Missouri River, Sleeping Giant/Missouri River, Hauser Lake, Uppermost Missouri River, Scratchgravel Hills, Sheep Mountain, Pipestone, Upper Big Hole River, and Humbug Spires. | Same as Alternative B. | Recreation management would be prioritized in the following five areas: Lower Holter Lake/Missouri River, Hauser Lake, Uppermost Missouri River, Pipestone, and Upper Big Hole River. |

***ISSUE 5: SPECIAL DESIGNATIONS INCLUDING ACEC, NATIONAL TRAILS, WILD AND SCENIC RIVERS AND WSAs***

**Goals**

- Designate ACECs where special management attention is required to protect important and relevant values.
- Manage National Trails to promote public enjoyment and protect their designated values.
- Manage preliminarily eligible river segments so that their suitability for potential National Wild and Scenic Rivers System designation is not impaired.
- Manage Wilderness Study Areas so that their suitability for potential wilderness designation is not impaired.

**Table 2-23**
**Comparison of Alternatives**

***Special Designations – ACEC***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Sleeping Giant ACEC (11,679 acres) would continue to be managed as an ACEC under the existing management plan. | Approximately 70,644 acres would be managed in the following four potential ACECs to protect relevant and important values:<br>• Sleeping Giant (11,679 acres)<br>• Elkhorns (50,431 acres)<br>• Humbug Spires (8,374 acres)<br>• Ringing Rocks (160 acres within existing withdrawal) | Approximately 87,893 acres would be managed in the following five potential ACECs to protect relevant and important values:<br>• Sleeping Giant (11,679 acres)<br>• Elkhorns (67,665 acres)<br>• Humbug Spires (8,374 acres)<br>• Spokane Creek (14 acres)<br>• Ringing Rocks (160 acres within existing withdrawal) | Approximately 23,695 acres would be managed in the following three potential ACECs to protect relevant and important values:<br>• Sleeping Giant (11,679 acres)<br>• Elkhorns (3,575 acres)<br>• Humbug Spires (8,374 acres) |

***Special Designations – National Trails***

**Management Common to All Alternatives**

- The Continental Divide Trail would be managed cooperatively with the USFS in accordance with national policy guidelines. The Lewis and Clark Historic Trail would be managed cooperatively with the National Park Service (NPS) in accordance with national policy guidelines.
- BLM would seek opportunities to cooperatively manage National Trails through partnerships.
- BLM would continue cooperative efforts with PPLM and other partners to collectively manage the Lewis and Clark National Historic Trail under the Missouri/Madison Comprehensive Recreation Plan. All historical recreation sites within the trail corridor would continue to be managed in a manner that promotes public accessibility, resource protection, visitor safety, and interpretive education.

***Special Designations – National Trails – continued***

**Management Common to Action Alternatives (B, C, and D)**

- The two National Trails (Continental Divide National Scenic Trail and Lewis and Clark National Historic Trail) would be managed in accordance with the ROS classes, VRM classes, travel plan direction, and oil and gas stipulations established under the action alternatives.
- BLM would evaluate opportunities to re-route the Continental Divide Trail segment in coordination with the USFS to enhance non-motorized opportunities; reduce current needs for use easements/acquisitions through private lands; and remove motorized conflicts associated with the motorized road.

***Special Designations – Wild and Scenic Rivers***

**Management Common to All Alternatives**

- In cooperation with other agencies, local governments, and special interest groups, management would be conducted in a manner to protect and enhance the outstandingly remarkable values for each suitable river segment.

**Table 2-23**
**Comparison of Alternatives**

***Special Designations – Wild and Scenic Rivers***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| The suitability study of the four river segements (Upper Big Hole River - 2.3 miles, Missouri River - 3.1 miles, Moose Creek - 4.0 miles, and Muskrat Creek - 2.6 miles) determined to be eligible for designation in the National Wild and Scenic River System would not be completed and protective management would continue indefinitely for all four river segments. | Muskrat Creek (2.6 miles) would be recommended as suitable for inclusion in the National Wild and Scenic Rivers System (NWSRS).<br>Missouri River (3.1 miles) would be found preliminarily suitable, but would only be recommended for inclusion in the NWSRS pending USFS (Helena National Forest) concurrence and coordination.<br>The Upper Big Hole River and Moose Creek segments would not be recommended as suitable. | Under Alternative C all four eligible river segments (totaling 12 miles) would be recommended as suitable for inclusion in the National Wild and Scenic Rivers System. | None of the four eligible river segments would be recommended as suitable for inclusion in the National Wild and Scenic River System. |

***Special Designations – Wilderness Study Areas***

**Management Common to All Alternatives**

- All six WSAs (Humbug Spires, Sleeping giant, Sheep Creek, Black Sage, Elkhorns Tack-on, and Yellowstone River Island) would continue to be managed under the Interim Management Policy and Guidelines for Lands under Wilderness Review until such time as Congress either designates them as wilderness or releases them from further consideration as wilderness.
- WSAs would continue to be managed in accordance with the established monitoring and sign plans for each WSA.
- Sleeping Giant and Sheep Creek WSAs would continue to be managed as part of the Sleeping Giant ACEC and management plan.

**Management Common to Action Alternatives (B, C, and D)**

- Sleeping Giant, Sheep Creek, Humbug Spires, and Elkhorns Tack-on WSAs would be managed as ACECs as per management direction described in the ACEC section regardless of whether Congress designates them as wilderness or releases them from wilderness consideration.
- In the event that Congress releases Black Sage and Yellowstone Island WSAs from wilderness consideration, they would be managed as per management direction described by alternative as described above in Chapter 2.

**Table 2-23**
**Comparison of Alternatives**

***Management Concern: Air Resources***

**Goals**

- Ensure BLM authorizations and management activities protect the local quality of life and sustain economic benefits by complying with Tribal, local, state, and federal air quality regulations, requirements, and implementation plans.

**Management Common to All Alternatives**

- BLM would continue to participate in local, state, and federal ambient air quality monitoring programs, as required.
- BLM would comply with local, state, and federal regulatory requirements.
- All resource uses would meet the Land Health Standards for air quality.
- Management would minimize or prevent air quality degradation throughout the Planning Area by applying mitigation measures to projects.
- Mitigation measures would be developed as appropriate to ensure compatibility of projects with air resource management.

***Management Concern: Soils***

**Goals**

- Manage uses to minimize accelerated soil erosion and compaction and maintain surface soil water infiltration based on site-specific conditions.
- Maintain or improve soil health and fertility, prevent or minimize erosion and compaction while supporting multiple use management.

***Management Concern: Soils – continued***

**Management Common to All Alternatives**

- Soil management objectives would include: reducing soil erosion associated with steeper slopes, granitic soils, and high recreational use areas; reducing sediment delivery to streams; reducing soil movement resulting from burned areas, aboveground disturbances, and accelerated streambank erosion.
- BMPs would be implemented at the site-specific project level to maintain or improve the soil resources.
- Soil compaction and erosion problems would be diagnosed using Land Health Standards.
- Mitigation or seasonal activity restrictions would be applied to activities in areas with significant soil compaction or accelerated erosion.

**Management Common to Action Alternatives (B, C, and D)**

- BLM would reseed disturbed areas where needed.

**Table 2-23**
**Comparison of Alternatives**

***Management Concern: Water Quality***

**Goals**

- Restore and/or maintain the chemical, physical, and biological integrity of water resources to protect designated beneficial uses and achieve water quality standards.
- Maintain existing or acquire new water rights on BLM land to ensure water availability for multiple-use management.
- Minimize erosion and accelerated runoff to streams to improve watershed function.
- Maintain or improve morphological conditions to a stable state that can fully support beneficial uses.
- Protect water quality for municipal, industrial, agricultural, recreation, and residential purposes by adopting protective measures to meet tribal, state, and local water quality requirements.

**Management Common to All Alternatives**

- Land Health Standards would be implemented to protect beneficial uses of water are protected and ensure that water quality meets State standards.
- BLM would continue to cooperate with Montana Department of Environmental Quality and communities in the development of Water Quality Restoration Plans and Source Water Protection Plans.
- BLM would comply with non-degradation provisions of the Montana Water Quality Act.
- Projects would be reviewed on a case-by-case basis to minimize impacts to water quality.
- Water rights and instream flow reservations would be maintained subject to Montana water law.

**Management Common to Action Alternatives (B, C, and D)**

- Existing water rights would be maintained to ensure water availability for multiple-use management and proper functioning riparian and upland areas.
- Water quality would be monitored to establish baseline conditions, identify areas of concern, and document progress from mitigation measures.
- BLM would participate in the development, implementation, and monitoring of water quality restoration plans/TMDL plans.

***Management Concern: Water Quality - Total Maximum Daily Loads (TMDLs)***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Present levels of stream restoration activities would continue. Progress of past actions to improve water quality would be monitored. | BLM would examine "Water Quality Restoration Plans" (Plans) to determine if reduction targets of pollutants (TMDLs) are reasonable and attainable. Plans would be implemented as funding becomes available. | BLM would reduce pollutants in streams to levels indicated in "Water Quality Restoration Plans." Plans would be implemented as funding becomes available. | Same as Alternative A. |

**Table 2-23**
**Comparison of Alternatives**

***Management Concern: Water Quality - Water Rights***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| No related action. | BLM would consider acquiring water rights from willing sellers. | Same as Alternative B. | No related action. |

***Management Concern: Water Quality - Fire Rehabilitation***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| No related action. | Burned areas would be monitored for weed infestations and accelerated soil erosion. Where sedimentation impacts adjacent streams, erosion would be mitigated. | Accelerated soil erosion and sedimentation in burned areas would be mitigated. | No related action. |

***Management Concern: Visual Resources***

**Management Common to All Alternatives**

- Visual resources would be managed according to VRM classes as described in Appendix C.
- Visual resource design techniques and best management practices would be use to minimize short and long-term visual impacts of projects.
- Visual contrast ratings for major projects within VRM Class I, II, and III areas would be completed according to BLM Handbook H-8341-1.
- VRM Class I objectives would be maintained for all WSAs.

**Management Common to Action Alternatives (B, C, and D)**

- VRM classifications would be established for all BLM lands based on visual resource characteristics.

***Management Concern: Visual Resources***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Approximately 31,500 acres would be managed as VRM Class I. | Approximately 31,500 acres would be managed as VRM Class I. | Approximately 31,500 acres would be managed as VRM Class I. | Approximately 31,500 acres would be managed as VRM Class I. |
| Approximately 25,400 acres would be managed as VRM Class II. | Approximately 48,900 acres would be managed as VRM Class II. | Approximately 67,600 acres would be managed as VRM Class II. | Approximately 6,600acres would be managed as VRM Class II. |
| Approximately 250,400 acres would be managed as VRM Class III and IV. These areas would continue to be evaluated and protected on a case-by-case basis through project/activity plans. | Approximately 125,200 acres would be managed as VRM Class III.<br>Approximately 101,700 acres would be managed as VRM Class IV. | Approximately 151,700 acres would be managed as VRM Class III.<br>Approximately 56,500 acres would be managed as VRM Class IV. | Approximately 142,900 acres would be managed as VRM Class III.<br>Approximately 126,300 acres would be managed as VRM Class IV. |

**Table 2-23**
**Comparison of Alternatives**

***Management Concerns: Cultural Resources, Traditional Cultural Properties and Paleontological Resources***

**Goals**

- Preserve and protect eligible cultural resources, and traditional cultural properties within the BFO.
- Identify cultural resource sites and traditional cultural properties and mitigate impacts when necessary, from natural or human-caused deterioration.
- Preserve and protect eligible cultural resources to ensure that they are available for appropriate uses by present and future generations.

**Management Common to All Alternatives**

- BLM would conduct inventories as per Section 106 of the National Historic Preservation Act to avoid disturbance to cultural resources.
- To minimize impacts to significant cultural resources, projects would be designed to avoid disturbance or mitigated through data recovery as a last resort.
- BLM would continue to consult with tribal governments to meet requirements under federal law and insure protection of sites important to Indian Tribes.
- BLM's consultation process for historic mining sites would continue in accordance with the Historic Placer and Lode Mining Properties Programmatic Agreement that specifies creation of a historic preservation plan to organize and compile what is known about various historic mining districts.
- Fossil localities would be afforded the same consideration as historic sites during project planning.
- Projects would be redesigned to avoid or minimize effects to fossil localities. If this is not feasible then specimens would be excavated by permitted paleontologists.

***Management Concerns: Cultural Resources, Traditional Cultural Properties***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| BLM would inventory 100 acres per year in compliance with Section 110, National Historic Preservation Act. | BLM would identify areas with a high potential for various archaeological/ historical site types, and conduct 200 acres of proactive inventory in those areas each year. One hundred acres of low potential areas would be inventoried each year for comparison. | BLM would identify areas with a high potential for various archaeological/ historical site types, and conduct 1,000 acres of proactive inventory in those areas. Three hundred acres of low potential areas would be inventoried each year for comparison. | BLM would conduct proactive inventories as time permits. |
| Educational and public outreach programs would be provided as requested and volunteer assistance relationships would be developed as time permits. | Educational and public outreach programs would be provided as requested. | Educational and public outreach programs would be provided as requested. | Educational and public outreach programs would be provided as requested. |
| No related action. | Eligible historic buildings would be maintained consistent with National Park Service standards as funding permits. | Same as Alternative B. | No related action. |

**Table 2-23**
**Comparison of Alternatives**

***Management Concern: Paleontological Resources***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| At the project level, BLM would continue to map fossil localities so as to avoid them during project implementation. If the locality cannot be avoided, then permitted paleontologists would be contacted to assist in removal of fossil resources. | Same as Alternative A. | At the project level, BLM would continue to map fossil localities so as to avoid them during project implementation. If the locality cannot be avoided, permitted paleontologists would be contacted to assist in removal of fossil resources. BLM would cooperate with permitted institutions/parties to map and record fossil localities. | Same as Alternative A. |

***Management Concern: Lands and Realty – Land Use Authorizations***

**Goals**

- Look for opportunities to acquire non-federal land or interest in non-federal land with important resources and resource uses.
- Provide for land-use opportunities to provide a sustained flow of economic benefits and meet local infrastructure needs while protecting or minimizing adverse impacts to resources and resource uses.

***Management Concern: Lands and Realty – Land Use Authorizations – continued***

**Management Common to All Alternatives**

- Land use authorization requests would be analyzed and mitigation measures would be applied on a case-by-case basis.
- New right-of-way facilities would be located within or adjacent to existing rights-of-way to the extent practical.
- New communication site users would be grouped into existing facilities to minimize impacts to other resources and expedite permitting process.
- Site plans would be completed prior to authorizing communication site uses in new areas.
- Proposals for renewable energy development would be considered on a case-by-case basis. Guidelines and Best Management Practices (BMPs) from the Wind Energy Development Programmatic EIS would be used when considering wind energy projects on BLM land.
- Suggested Practices for Raptor Protection on Power Lines (APLIC 1996) would be implemented in the construction and operation of right-of-way facilities.
- Owners of non-Federal land surrounded by public land managed under FLPMA would be allowed a degree of access across public land to provide for reasonable use and enjoyment of non-Federal lands.
- Pre-FLPMA rights-of-way constructed on public lands prior to FLPMA would be recognized as valid uses even though laws under which they were authorized were repealed by FLPMA. If these rights-of-way expire, holders would be required to apply for new FLPMA rights-of-way.

**Table 2-23**
**Comparison of Alternatives**

### Management Common to Action Alternatives (B, C, and D)

- Existing Communication Sites at Boulder, Bull Mountain, Limestone Hills, Montana City, Mt. Belmont, Toston, and Wickes would be formally designated as communication sites for the BFO. New facilities within designated sites would conform to existing site plans. Once designated communications sites are filled to near capacity, new site locations may be authorized after site management plans and site-specific NEPA analyses are completed.
- No new rights-of-way would be authorized in identified exclusion areas (approximately 27,361 acres)
- New rights-of-way in identified avoidance areas (approximately 75,626 acres) would be allowed only if no other routing options exist. Valid existing rights-of-way in avoidance areas would be recognized and holders would be allowed to maintain their facilities.
- Two utility corridors, originally considered in the 1992 Western Regional Corridor Study would be designated where they cross BFO lands.
- New leases, permits, rights-of-way, and easements would be authorized in a manner consistent with meeting Land Health Standards and applicable Best Management Practices.
- Attempts would be made to negotiate changes in existing authorizations which would meet or move toward meeting Land Health Standards.

***Management Concern: Lands and Realty – Withdrawals***

### Management Common to All Alternatives

- Existing withdrawals would be reviewed prior to the end of the withdrawal period to determine if they should be extended, revoked, or modified. Withdrawals no longer needed for their original intended purpose would be recommended for revocation or modification.
- New withdrawal proposals would be considered where land would transfer from one federal agency to another or where resource values or agency investments are best protected by withdrawal if strongly justified and in conformance with current withdrawal and mineral policy.
- If legislation is passed for a military withdrawal west of Townsend it would be adopted in the Approved Resource Management Plan as described in the Record of Decision for this RMP.
- Land classifications, as "de facto" withdrawals, would be reviewed to determine if they should be continued or terminated. Classification and Multiple Use Act retention classifications would be terminated.
- The Recreation and Public Purpose classification on 200 acres at the Deep Creek Ski Area would be terminated.
- The parcel used by Last Chance Handgunners under an R&PP lease in Boulder would be reclassified for disposal.

### Alternatives A and D

- Withdrawals would be considered on a case-by-case basis.

### Alternatives B and C

- Priority for new withdrawals would be for all developed and undeveloped recreation sites followed by new acquisitions through exchange or purchase, and in ACECs to protect resources and values as needed.

**Table 2-23**
**Comparison of Alternatives**

***Management Concern: Lands and Realty – Withdrawals***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Withdrawals from mineral entry would be considered on a case-by-case basis. | Priority for new withdrawals would be for all developed recreation sites, followed by new acquisitions and ACECs to protect resources as needed. | Same as Alternative B. | Withdrawals from mineral entry would be considered on a case-by-case basis. |

***Management Concern: Lands and Realty – Land Ownership Adjustment***

**Goals**

- Look for opportunities to acquire non-federal land or interest in non-federal land with important resources and resource uses.
- Provide for land-use opportunities to provide a sustained flow of economic benefits and meet local infrastructure needs while protecting or minimizing adverse impacts to resources and resource uses.

**Management Common to All Alternatives**

- Methods of land ownership adjustment would include exchanges, sales, transfers, fee acquisition, and donation.
- Public access would be maintained or improved through all land ownership adjustment transactions.
- BLM land within disposal areas would be made available for sales, exchanges, or both. Some lands identified for disposal would be retained in public ownership based on site-specific application of the land ownership adjustment criteria (Appendix L).
- Lands to be sold would meet the following disposal criteria from FLPMA:

❖ Such land must be difficult and uneconomic to manage as part of the public land base, and must not be suitable for management by another federal department or agency.

❖ Such land must have been acquired for a specific purpose and must no longer be required for that or any other federal purpose.

❖ Disposal of such land will serve important public objectives that can only be achieved prudently or feasibly if the land is removed from public ownership and if these objectives outweigh other public objectives and values that would be served by maintaining such land in federal ownership.

**No BLM lands in the BFO are suitable for Desert Land Entry. Alternative A**

- Land ownership adjustment guidance would be provided by the 1984 Headwaters RMP, 1979 Dillon Management Framework Plan, and "Land Pattern and Land Adjustment, Supplement to the State Director Guidance for Resource Management Planning in Montana and the Dakotas, 1984" as amended by the 1989 State Director's guidance pertaining to access.
- Non-federal land to be acquired by the BFO through exchanges would generally be located in retention areas.

**Management Common to Action Alternatives (B, C, and D)**

- Approximately 298,408 acres of BLM land would be identified in the retention category.
- High priority lands for retention and potential future acquisition would include those in and immediately adjacent to special designation areas (ACECs, Wild and Scenic Rivers, Wilderness Study Areas, National Trail Corridors, Special Recreation Management Areas, and recreation sites) as well as habitat for priority and special status species.

- Approximately 8,901 acres of land would be identified as available for disposal.
- Lands leased or conveyed under the R&PP Act would be classified for such disposal under Section 7 of the Taylor Grazing Act (42 USC 315f) and 43 CFR 2400.
- Right-of-way holders would be issued perpetual easements for their facilities prior to the disposal of any BLM parcels.

***Management Concern: Lands and Realty – Access and Unauthorized Land Use***

**Management Common to All Alternatives - Access**

- BLM would acquire legal public access and administrative access to BLM land from willing landowners through easements, fee purchase, exchange, donation, and/or long-term land use agreements.

**Alternative A**

- Access acquisition efforts would be focused on larger blocks of BLM land which are designated for retention, areas with important resource values, areas where public demand for access is high, and areas with substantial BLM investments.

**Management Common to Action Alternatives (B, C, and D)**

- Acquisition of access would be focused on routes designated as "open" in travel plans that lack legal public access. Criteria described in **Appendix L** would be used for identifying new access opportunities and managing existing access to BLM lands.

**Management Common to All Alternatives – Unauthorized Land Use**

- BLM would abate realty-related unauthorized use through prevention, detection, and resolution. Unauthorized use of BLM administered land would be resolved through termination, short or long-term authorization, sale, or exchange as appropriate. Resolution of trespasses would require settlement of trespass liabilities and reclamation of any resource damage.

***Management Concern: Minerals***

**Goals**

- Ensure that federal minerals are available for energy and mineral exploration and development.
- Manage exploration and development of mineral resources and ensure they are conducted in an environmentally sound manner.
- Where possible, conserve significant or unique geological features.

**Management Common to All Alternatives**

- The BLM Energy and Non-Energy Mineral Policy, which references several existing acts, recognizes the nation's need for domestic sources of minerals, energy, and other resources and the responsibilities concerning the discovery, development, production and acquisition of minerals and metals. All Energy and Minerals exploration, development, and production activities would be managed to prevent unnecessary or undue degradation. Management Common to Action Alternatives (B, C, and D)
- For all exploration and mining proposals, BLM would ensure operations take all practical measures to maintain, protect, or minimize disturbances to resources.

**Table 2-23**
**Comparison of Alternatives**

***Management Concern: Minerals***

- Mineral activity would be managed to meet, or move toward meeting Land Health Standards.
- Future changes to ESA listings of species or occupied habitats may require changes or modifications of proposed activities to comply with the requirements of the act.

***Management Concern: Minerals – Roads***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Mineral operations permits would identify requirements and BMPs necessary to avoid or minimize adverse effects on natural resources. | Where no alternative to road construction exists, roads (including in riparian areas) would be kept to the minimum necessary for the approved mineral activity. Roads and facilities would be closed and the landscape rehabilitated when no longer required for mineral or land management activities. | No new or existing mineral operations (salable, leasable, and locatable) would be allowed to construct new structures, support facilities, or roads inside Riparian Management Zones. | New and existing mineral operations (salable, leasable, and locatable) would be allowed to construct structures, support facilities, and roads in riparian areas using stipulations and BMPs when necessary. Roads and facilities no longer needed for mineral or land management would be reclaimed to the best extent possible. |

***Management Concern: Minerals – Leasable Solid Minerals***

**Management Common to All Alternatives**

- BLM would consider proposals for developing leasable solid minerals (coal, phosphate, sodium, potash, sulphur, oil shale, native asphalt, and solid and semi-solid bituminous rock) under the administration of the federal government on a case-by-case basis. Site-specific environmental analysis would be required to lease these minerals.

***Management Concern: Minerals – Leasable Fluid Minerals (Oil and Gas)***

**Management Common to All Alternatives**

- Public lands available for oil and gas leasing would be offered first by competitive bid at an oral auction.
- Appropriate stipulations, terms, and conditions would be applied at the time of leasing.
- Interim management policy and guidelines for mineral leasing in WSAs would be applied as appropriate. All WSAs would be closed to new oil and gas leases where BLM owns both the surface and sub-surface. This acreage totals about 28,774 acres.

***Management Concern: Minerals – Leasable Fluid Minerals (Oil and Gas)***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Approximately 31,911 acres would be open to leasing, subject to standard lease terms. | Approximately 17,943 acres would be open to leasing, subject to standard lease terms. | Approximately 17,016 acres would be open to leasing, subject to standard lease terms. | Approximately 54,079 acres would be open to leasing, subject to standard lease terms. |
| Approximately 313,694 acres would be | Approximately 325,165 acres would be | Approximately 30,983 acres would be | Approximately 468,421 acres would be |

**Table 2-23**
**Comparison of Alternatives**

| | | | |
|---|---|---|---|
| open to leasing under Controlled Surface Use/Timing Limitation stipulations. | open to leasing under Controlled Surface Use/Timing Limitation stipulations. | open to leasing, subject to Controlled Surface Use stipulations. | open to leasing, subject to Controlled Surface Use/Timing Limitation stipulations. |
| **Alternative A - No Action** | **Alternative B - Preferred** | **Alternative C** | **Alternative D** |
| Approximately 251,779 acres would be open to leasing subject to No Surface Occupancy stipulations.<br><br>Approximately 54,810 acres would be unavailable for leasing: 28,774 acres would be in WSAs; 26,036 acres would be within core areas of state wildlife management areas and in lands recently acquired with LWCF funds. | Approximately 280,312 acres would be open to leasing, subject to No Surface Occupancy stipulations.<br><br>Approximately 28,774 acres would be unavailable for leasing in WSAs. | Approximately 23,903 acres would be open to leasing, subject to No Surface Occupancy stipulations.<br><br>Approximately 580,382 acres would be unavailable for leasing within the following areas:<br>• prairie dog towns<br>• sage grouse winter/spring range<br>• 0.5 mile of sage grouse strutting grounds<br>• state wildlife management areas<br>• big game winter/spring range<br>• elk calving/big game birthing areas<br>• bighorn sheep yearlong range<br>• 1 mile of bald eagle nest site/breeding habitat<br>• 0.5 mile of raptor breeding territories<br>• 1 mile of peregrine falcon nest sites/breeding habitat<br>• 0.5 mile of ferruginous haw breeding territories<br>• 0.5 mile of westslope cutthroat trout habitat (90-99 percent genetically pure)<br>• 0.5 mile of Yellowstone cutthroat trout habitat<br>• municipal watersheds<br>• WSAs<br>• lands acquired with LWCF funds. | Approximately 93,288 acres would be open to leasing, subject to No Surface Occupancy stipulations.<br><br>Approximately 28,774 acres would be unavailable for leasing in WSAs with an additional 7,632 acres unavailable in lands recently acquired with LWCF funds. |

**Table 2-23**
**Comparison of Alternatives**

***Management Concern: Minerals - Geothermal***

**Management Common to All Alternatives**

- Lands in the Decision Area would be available for geothermal leasing, unless located within WSAs or in instance where it is determined that issuing leases would cause unnecessary or undue degradation to public lands or resources.
- Stipulations developed for oil and gas leases would be applied to geothermal leases if appropriate.

***Management Concern: Minerals - Geophysical Exploration***

**Management Common to All Alternatives**

- BLM would review Notices of Intent to Conduct Geophysical Exploration and develop appropriate mitigation measures so as not to create undue and unnecessary degradation. A site-specific environmental analysis would be prepared for each NOI filed.

***Management Concern: Minerals - Locatable Minerals***

**Management Common to All Alternatives**

- At a minimum, an annual compliance inspection of each active notice would be conducted.
- Opportunities and accessibility to mineralized areas for exploration and development would be provided.
- Special project design measures would be incorporated into exploration and development projects as needed to prevent unnecessary or undue degradation to other resources such as special status or priority species, visual corridors, cultural resource sites, and fossil localities.
- Reclamation and restoration activities would be monitored to determine effectiveness of management practices.
- For placer mining operations, reclamation activities would be required to restore stream channels and riparian habitats to functioning condition as close to pre-mining conditions as possible.
- As information becomes available, known areas of geological hazards (e.g. landslide prone areas, avalanche areas, etc.) would be mapped.

***Management Concern: Minerals - Locatable Minerals - Withdrawals***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| Approximately 6,300 acres of land would remain withdrawn from locatable mineral entry. Many of these acres are included in Power Site Reserve and Power Project withdrawals. | Same as Alternative A for existing withdrawals. | Same as Alternative A for existing withdrawals. | Same as Alternative A for existing withdrawals. |

| | | | |
|---|---|---|---|
| No related action for newly proposed withdrawals. | An additional approximately 198 acres would be recommended for withdrawal from mineral entry if justified and in conformance with current withdrawal and mineral policy. These acres are located in eight different recreation sites. | An additional approximately 378 acres would be recommended for withdrawal from mineral entry if justified and in conformance with current withdrawal and mineral policy.<br><br>Approximately 198 of these acres are located in eight different recreation sites. The remaining approximately 180 acres are in riparian areas of Muskrat Creek and Nursery Creek to protect an important genetically pure westslope cutthroat trout population. | Same as Alternative A. |

***Management Concern: Minerals - Salable Minerals***

**Management Common to All Alternatives**

- Salable mineral sites would have approved mining and reclamations plans and environmental analyses prior to be opened.
- Mineral material would be sold at fair market value to the public but would be free to state, county, or other local government when used for public projects.

***Management Concern: Minerals - Salable Minerals***

| Alternative A - No Action | Alternative B - Preferred | Alternative C | Alternative D |
|---|---|---|---|
| The BLM would authorize the purchase of salable minerals (common varieties of sand, stone, gravel, pumice, cinders, clay, and petrified wood) from the federal government through a contract of sale (by the ton or cubic yard) or a free-use permit unless specific circumstances dictate otherwise. Extraction of materials from previously disturbed sites would be encouraged and all impacts to natural resources are mitigated. | The BLM would continue to authorize the purchase of salable minerals (common varieties of sand, stone, gravel, pumice, cinders, clay, and petrified wood) from the federal government through a contract of sale (by the ton or cubic yard) or a free-use permit unless specific circumstances dictate otherwise. Extraction of materials from previously disturbed sites would be encouraged. All development and operating impacts to natural resources and local residence will be mitigated. | The BLM would not allow the purchase of salable minerals (common varieties of sand, stone, gravel, pumice, cinders, clay and petrified wood), unless desired by the state or counties, or within existing community pits. | The BLM would authorize the purchase of salable minerals (common varieties of sand, stone, gravel, pumice, cinders, clay, and petrified wood) from the federal government through a contract of sale (by the ton or cubic yard) or a free-use permit unless specific circumstances dictate otherwise. |

**Table 2-23**
**Comparison of Alternatives**

***Management Concern: Abandoned Mine Lands***

**Goals**

- Reclaim AML sites on public land to improve water quality, plant communities, and diverse fish and wildlife habitat.
- Reduce and/or eliminate risks to human health from hazardous mine openings.
- Protect historic resources and wildlife habitat commonly associated with AML sites.

**Management Common to All Alternatives**

- To the extent possible on BLM lands, BLM would strive to meet state and federal water quality standards in watersheds impacted by historic mining.
- BLM would assess level of risks at AML sites and prioritize for reclamation based on standardized risk assessment. Reclamation would be implemented at the highest risk sites first.
- Where deemed appropriate by BLM personnel, BLM would restore severely impacted soils and watersheds as close as possible to pre-disturbed conditions that support productive plant communities and ensure properly functioning watersheds.
- Closures of dangerous inactive and abandoned mine sites would be designed to reduce the risks to human health and safety, restore the environment, and protect geological and cultural resources and meet or move toward meeting Land Health Standards.
- Restoration and reclamation activities and repositories would be monitored to determine effectiveness of reclamation practices.
- To the extent possible on BLM lands, BLM would strive to meet state and federal air quality standards in the interest of protecting human health potentially impacted by fugitive dust emissions.

***Management Concern: Hazardous Materials Management***

**Goals**

- Mitigate threats and reduce risks to the public and environment from hazardous materials.

**Management Common to All Alternatives**

- Disposal of hazardous materials on public lands would generally not be permitted. When the use or storage of hazardous materials is authorized (i.e. in mining operations or other types of commercial activities) special stipulations would be applied to comply with appropriate laws, regulations, and policies. In the event of hazardous materials incidents on public land, standard operating procedures would be used to respond. Cleanups and reclamation would be conducted in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan and the NEPA decision.
- BLM would promote and support the appropriate use and recycling of hazardous materials in public facilities and on public land to prevent or minimize the generation and disposal of hazardous wastes.
- Environmental Site Assessments would be conducted for land acquisitions, land disposals, and for right-of-ways if applicable. Land uses would be authorized and managed to reduce the occurrence and severity of hazardous materials incidences on public land.
- BLM would assess level of risk at hazard sites and conduct remediation at highest priority sites that are the greatest risks to the public and environment.
- Pollutants, such as flammable liquids and lubricants, would be prevented from entering streams by storing outside of riparian areas, having a spill prevention and control plan, and not allowing refueling within riparian areas (with the exception of permitted mining activities, fire suppression activities, reclamation work and chainsaw re-fueling).

**Table 2-23**
**Comparison of Alternatives**

***Management Concern: Social and Economic Environment***

**Goals**

- Provide opportunities for economic benefits while minimizing adverse impacts to resources and resource uses.
- Provide for a diverse array of activities that result in social benefits for local residents, businesses, visitors, interested citizens, and future generations, while minimizing negative social effects.
- Sustain, and where appropriate, restore the health of forest, rangeland, aquatic, and riparian ecosystems administered by the BLM to provide a sustained flow of economic benefits within the capability of the ecosystem.
- Protect visual quality, wildlife habitats, and recreation opportunities on BLM lands to sustain non-market economic values; and, make resource commodities available to provide a sustainable flow of economic benefits within the capability of the ecosystem.

**Management Common to Action Alternatives (B, C, and D)**

- Identified Special Recreation Management Areas and the remaining Extensive Recreation Management Areas would be managed for identified user markets, activities, and experience levels.
- Collaborative and/or stewardship processes would be used in the analysis and treatment of all resources and uses, as possible.
- BLM would provide opportunities for traditional and nontraditional uses of forest and forest products by incorporating sound ecological principles while contributing to the economic stability of the community.
- Use of new and developing technologies and industries would be encouraged in achieving healthy forest, stewardship, biomass utilization, and fuel management goals.

***Management Concern: Environmental Justice***

**Goals**

- Identify and remediate to the extent possible disproportionate negative effects to minority or low income populations per Executive Order 12898.

**Management Common to All Alternatives**

- Under all alternatives, BLM would evaluate and disclose whether actions would place a disproportionate share of negative environmental consequences on any particular populations covered by the Executive Order, and where practical, avoid such consequences.

***Management Concern: Tribal Treaty Rights***

**Goals**

- Accommodate treaty and legal rights of appropriate Native American groups in management of public lands.

**Management Common to All Alternatives**

- BLM would notify and consult with tribes on BLM actions. Consultation and coordination would be conducted on a government to government basis with federally recognized tribes.

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***AIR QUALITY*** | | | | |
| | Air quality would continue to be protected although short term impacts could occur from ongoing fire events, prescribed fire activities, slash burning, or dust from travel on unpaved roads, and dust and exhaust from construction or development activities. | Air quality would continue to be protected similar to Alternative A although short-term impacts from prescribed burning could be greater due to increase in potential acreage burned. | Air quality would continue to be protected similar to Alt. A although short-term impacts from prescribed burning would be less than in all other alternatives due to decrease in potential acreage burned. | Air quality would continue to be protected similar to Alt. A. Smoke from prescribed burning would be greater than any other alternative, and where fires are allowed to burn for resource benefits there could be a longer term negative impact on air quality. |
| ***SOIL RESOURCES*** | | | | |
| | Alt. A would provide no change from current conditions. | Alt. B would cause more impacts on soil resources than Alt. C, but less than Alts. A or D. | Alt. C would be most protective of soil resources and would create the least impacts of all alternatives. | Alt. D would create the greatest amount of impact to soil resources of the action alternatives. |
| **Restoration of vegetative communities** | Short- to mid-term impacts to soils from restoration of vegetative communities, and long-term benefits of restored communities would be greater than Alt. C but less than Alts. B or D. | Short to mid-term adverse effects from restoration of vegetative communities would be greater than Alts. A and C, but less than Alt. D, as would long-term benefits associated with restoration. | Short to mid-term adverse effects from restoration of vegetative communities would be the least of all alternatives, but long-term benefits would also be less. | Short to mid-term adverse effects from restoration of vegetative communities would be greatest of all alternatives, but long-term benefits would be greatest. |
| **Livestock grazing** | Greater impacts associated with livestock grazing than Alts. B or C due to availability of additional allotments. | Reduced soil impacts from grazing than Alts. A and D due to management of McMasters and, Spokane Hills as forage reserve allotments. | Least impacts from livestock grazing of all alternatives because several allotments would not be available for grazing. | Same as Alt. A. |
| **Travel management** | Greatest soil erosion potential resulting from the most miles of open motorized road. | Less ground disturbance and erosion due to road closures than Alts. A and D, but less than Alt. C. | Reduced ground disturbance associated with most motorized route closures would benefit soil more than other alternatives. | Reduction in ground disturbance from closing roads to motorized use would be greater than Alt. A, but less than Alts. B and C. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| **Timber harvest/ mine development** | No additional protection for soils by allowing timber harvest in SMZs. | More protection than Alts. A and D by not allowing new mining-related roads and facilities inside RMZ, unless there is no other option. Ground disturbance from timber harvest in RMZs has greater impacts than Alt. C but less than Alts. A and D. | Greater soil protection in riparian areas than other alternatives since timber harvest and mining roads/ facilities would not be allowed in RMZs. | Same as Alt. A. |
| **Firewood management** | Least long-term benefit to soils in riparian areas due to SMZ law guidance. | More beneficial than Alt. A, but less than Alt. C due to restrictions for firewood cutting within 100 feet of live streams and 50 feet of intermittent streams. | Most long-term benefit to soils in riparian areas due to restriction that firewood cannot be cut within 200 feet of live streams or 100 feet of intermittent streams. | Same as Alt. B. |
| ***WATER RESOURCES*** | | | | |
| **Vegetation treatments** | Short to mid-term erosion/ sedimentation impacts from ground disturbance and long-term benefits to water quality greater than Alt. C but less than Alts. B and D. | Greater effects (short-term adverse and long-term benefits) than Alts. A and C, but less than Alt. D. | Most protective from adverse effects due to least ground disturbance proposed with vegetative treatments, but least long-term benefits of all alternatives. | Greatest impacts (short-term adverse and long-term benefits) of all alternatives because highest level of vegetation treatments. |
| **Riparian Vegetation Treatments** | Negligible effects since only 30 acres riparian vegetation treated per decade. | Short-term localized erosion and sedimentation to streams from treating up to 700 acres/decade in riparian areas but long-term benefits to water quality from improved conditions. | Effects less than Alts. B and D, but more than Alternative A since 200 acres riparian vegetation treated per decade. | Most short-term adverse effects and long-term benefits of all alternatives since 1,700 acres riparian vegetation treated per decade. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***WATER RESOURCES – continued*** | | | | |
| **Fire Rehabilitation** | Weed and erosion control conducted in burned areas as outlined in BLM's Emergency Fire Rehabilitation Handbook would serve to reduce erosion and subsequent stream sedimentation, though short-term impacts could occur until appropriate measures could be implemented. | More surface water protection than Alts. A and D but less than Alt. C because weed and erosion control in burned areas would only occur when stream sedimentation taking place. | Greatest benefit to surface water because weed and erosion control required anywhere accelerated erosion taking place in burned areas. | Same as Alt. A. |
| **Livestock Grazing** | Slightly greater erosion/ sedimentation and streambank stability impacts than Alts. B or C since more allotments available for grazing. | Fewer impacts than Alts. A and D since various allotments managed as forage reserves rather than general grazing. | Less impacts than Alt. B because several allotments unavailable for grazing. Least impacts of all alternatives. | Same as Alt. A. |
| **Noxious weeds** | Minimal effects to water quality expected since herbicides applied according to label directions, in accordance with National Vegetation EIS and BFO Weed Management Plan. Increase in weed infestations (more than Alt. C, but less than Alts. B and D) could increase potential for erosion and sedimentation, and thus water quality issues. | Minimal effects to water quality expected since herbicides applied according to label directions, in accordance with National Vegetation EIS, and BFO Weed Management Plan, and aerial applications would require a minimum 100-foot buffer from aquatic habitats. Increase in weed infestations under this alternative (more than Alts. A and C, but less than Alt. D) could increase potential for erosion, sedimentation, and thus water quality issues. | No effects to water quality expected since herbicides applied according to label directions, in accordance with National Vegetation EIS, and BFO Weed Management Plan, and aerial applications would not be allowed. Increase in weed infestations (least of any alternative) could still increase potential for erosion and sedimentation, and thus water quality issues. | Minimal effects to water quality expected since herbicides applied according to label directions, in accordance with National Vegetation EIS, and BFO Weed Management Plan. Increase in weed infestations (greatest of any alternative) could increase potential for erosion and sedimentation, and thus water quality issues. |
| **Riparian management** | No additional protection than afforded by SMZ law. | Alt. B more protective of water quality than Alternatives A and D due to RMZs. | Most protective because wider RMZs and no commercial timber harvest allowed. | Same as Alt. A. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| **Water rights** | No consideration given to acquiring water rights. | Increasing or maintaining instream flows through water rights acquisitions could benefit water quality more than Alts. A and D. | Same as Alt. B. | Same as Alt. A. |
| **Travel management** | Greatest degree of water quality impacts due to most open roads overall (629.2 miles), as well as within 300 feet of streams (94.3 miles), of all alternatives. | Fewer impacts to water quality than Alts. A and D due to second lowest number of open roads (416.8 miles) overall, and within 300 feet of streams (77.4 miles) of all alternatives. | Lowest impacts to water quality of any alternative due to fewest open roads (372.4 miles). Fewest open roads within 300 feet of streams (73.7 miles) of all alternatives. | Fewer water quality impacts than Alt. A but more than Alts. B and C. Second highest number of open roads (478.6 miles) and roads within 300 feet of streams (81.2 miles) of all alternatives. |
| **Road design and maintenance standards** | Least protective of water quality of all alternatives. | More protective than Alt. A, because roads minimized in RMZs, outsloping surfaces, routing drainage away from streams, and culvert stream crossings. | More protective than all other alternatives because 100-year storm event culverts would be installed at stream crossings. | Slightly less protective than Alt. B due to fewer design and maintenance considerations. |
| **Special designations** | Provides equal protection of NWSRS-eligible segments as Alt. C by limiting activities within a 0.25 mile corridor of all four segments (12 miles). Spokane Creek aquatic resource values within 14-acre area not protected with ACEC designation. | More protective than Alternative D, but less than Alternatives A and C since only two river segments considered for NWSRS. More protective than Alts. A and D in Spokane Creek due to its designation as ACEC. | Same as Alt. A for NWSRS suitability. Same as Alternative B for Spokane Creek ACEC designation. | Less water quality protection than other alternatives since no rivers recommended suitable for NWSRS. Spokane Creek not designated as potential ACEC. |
| **Oil and gas leasing** | Effects of NSO restrictions more protective for perennial streams and rivers than other alternatives. Standard lease terms less protective of municipal watersheds than other alternatives. | More protective of municipal water supplies than Alts. A and D due to NSO stipulation in municipal watersheds. | Most protective of municipal watersheds with no leasing of oil and gas allowed in municipal watersheds. | Controlled Surface Use stipulation less protective of municipal watersheds than Alts. B and C. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***WATER RESOURCES – continued*** | | | | |
| **Mining operations** | Most water quality impacts because new roads and facilities would be allowed in riparian areas. | More protective than Alts. A and D, because new roads and facilities would not be allowed in riparian areas unless there is no other option. | Most protective of all alternatives because new mining roads and facilities prohibited in riparian areas. | Same as Alt. A. |
| **Mineral withdrawals** | No proposed withdrawal in Muskrat Creek drainage | Same as Alt. A. | Would protect westslope cutthroat trout population, stream channel, and water quality associated with mining impacts by proposing a withdrawal from mineral entry of 180 acres of riparian areas in the Muskrat Creek drainage. | Same as Alt. A. |
| ***VEGETATION COMMUNITIES*** | | | | |
| ***General vegetation*** | | | | |
| **Livestock grazing** | Biomass on allotments would be reduced on 273,000 acres available for grazing. Density and production of palatable species may be reduced in localized areas. The reduction in fine fuels would reduce frequency and intensity of wildland fire. | Grazing effects would occur on 265,000 acres. Fine fuels buildup and some grass species decadence may occur on 8,000 additional acres unavailable for grazing. | Grazing effects would occur on 262,000 acres. Fine fuels buildup and some grass species decadence may occur on 11,000 additional acres unavailable for grazing. | Same as Alt. A. |
| **Revegetation seed mix** | Revegetation seed mixes consist of mostly native species. | Using native species or non-invasive seed mixes on burned areas and sites with high erosion potential would minimize proliferation of noxious weeds. Perennial non-native species may initiate persistent stands, | Using only native species for revegetation of disturbed areas would require intense management for weed control but long-term benefits of little or no maintenance once they are established. The slope stabiliz- | Same as Alt. B |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| | | which can inhibit colonization by native herbaceous species and conifers. | ing, quick ground cover, and invasive species competition of introduced species would be foregone. | |
| **Permanent Roads** | No set road density target for areas in big game winter and calving ranges. The existing road network would remain open for public use. Provides greatest flexibility for vegetation treatments. | No new, permanent roads would be allowed in big game winter range or calving habitat where road densities are 1 $mi/mi^2$ or less. Vegetation treatment options could be limited more than Alt. D but less than Alt C. | No new, permanent roads in big game winter range and calving areas where road densities where are 1.5 $mi/mi^2$or less. This is most restrictive of all alternatives for vegetation treatments. | No new, permanent roads would be allowed in big game winter range or calving habitat where road densities are 0.5 $mi/mi^2$ or less. Vegetation treatments would be limited more than Alt. A, but less than Alts. B and C. |
| **Protection of raptor nests** | Alt. A would provide no limitations to vegetation treatments associated with occupied raptor nests. | Alt. B would restrict noise disturbance and most management activities within 0.5 miles of occupied raptor nests, during the nesting and brooding period.<br>Approximately 500 acres per nest would be affected, making management more difficult. | Alt. C would restrict noise disturbance and most management activities within 1 mile of occupied raptor nests, during the nesting and brooding period.<br>Affects approximately 2,000 acres per nest, four times as many acres as Alt. B and sixteen times as many acres as Alt. D. | Alt. D would restrict noise disturbance and most management activities within 0.25 miles of occupied raptor nests.<br>Approximately 125 acres per nest would be affected, making management more restrictive than Alt. A, but less than Alts. B and C. |
| ***Grassland and Shrubland*** | | | | |
| **Vegetation treatments** | Would treat 5,250 acres per decade resulting in a net increase in conifer encroachment of approximately 1,161 acres per decade. | Would restore up to 15,450 acres per decade of grassland and shrubland communities for a net restoration (decrease in conifer encroachment) on up to 9,039 acres per decade. | Would treat up to 2,750 acres per decade resulting in net increase in conifer encroachment rather than an increase in restored habitat compared to Alts. B and D. | Would treat up to 25,900 acres per decade resulting in greater net increase in restored habitat (up to 19,489 acres per decade) than all other alternatives. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***VEGETATION COMMUNITIES - Grassland and Shrubland -continued*** | | | | |
| **Fire management (Prescribed fire)** | Would reduce fuel loading and remove encroaching conifers. | Projects planned to reduce density of conifer seedlings and saplings on 80 percent of area burned leaving conifer encroachment in mosaic of unburned patches. | Projects planned to burn least surface area (60 percent) to treat conifer encroachment. | Projects planned to burn 90 percent of surface area would be burned to reduce conifer encroachment. |
| | No timing restrictions for prescribed burning. | Soil, grasses, and forbs protected from fire-related mortality during hotter drier months by imposed burning restrictions May-August. | Timing restriction for prescribed burning the similar to Alt. B, but includes mechanical treatments as well, and therefore is most restrictive. | Same as Alt. A. |
| | Rest from livestock grazing in grassland/shrubland habitats before and after burning as determined through site-specific planning. | Resting areas from livestock grazing in grassland/shrubland habitats up to one year prior to treatment and two growing seasons following treatments (with case by case flexibility) would promote vegetative recovery before reapplying grazing. | Same as Alt. B but without flexibility to reduce post-treatment rest timeframe. Limited flexibility to meet permittee forage needs. | Rest prior to burning if needed and for one growing season after, additional rest on case-by-case basis. Vegetation recovery may occur more slowly. More flexibility to meet permittee forage needs. |
| **Mountain mahogany and bitterbrush restoration** | No proactive restoration proposed. | Treatment of mahogany and bitterbrush would be a priority. Vigor and health of these species would be improved compared to Alts. A and C through treatments reducing competing plants. | Would provide for opportunistic restorative treatments of mountain mahogany and bitterbrush communities when associated with other projects. Effects would be the same as Alts. B and D, but would occur on fewer acres. | Same as Alt. B. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***Forests and woodlands*** | | | | |
| **Dry forest treatments** | Least acres of dry forest treated per decade (5,100 acres) to help restore historic conditions and still exceed rate of decline in forest health. | Second most acres of dry forest treated per decade (up to 14,750 acres) to help restore historic conditions that would exceed rate of decline in forest health. | At a treatment rate of up to 4,800 acres per decade, dry forest would not be restored at a rate exceeding rate of decline in forest health. | Most acres of dry forest treated per decade to restore historic conditions (up to 18,200 acres per decade) of all alternatives. |
| **Cool, moist forest treatments** | Least acres of cool, moist forest treated per decade (2,350 acres) to help restore historic conditions and still exceed rate of decline in forest health. | Second most acres of cool, moist forest treated per decade (up to 3,750 acres) to help restore historic conditions that would exceed rate of declining forest health. | At a treatment rate of up to 550 acres per decade, cool moist forest would not be restored at a rate exceeding rate of decline in forest health. | Most acres of cool, moist forest treated per decade to restore historic conditions (up to 5,050 acres per decade) of all alternatives. |
| **Big Game Security Cover** | Guidelines from the Montana Cooperative Elk-Logging Study (Lyon et al. 1982) can be considered on a case-by case basis, as compared to action alternatives which specify core acreages that must remain unroaded or closed during the hunting season. Provides greatest flexibility for implementation. | Maintaining 250 acre blocks for big game security cover would restrict vegetation treatment options more than under Alternative A, but would still provide some flexibility. | Same as Alt. B | Same as Alt. B. |
| **Old forest structure** | No specific limitations associated with maintaining old forest structure. | Maintain and promote old forest structure through active restoration treatments and activities. More proactive than Alts. A and C. | Maintain and protect old forest structure. Management would be more reactive than proactive, unlike Alts. B and D. | Same as Alt. B. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***VEGETATION COMMUNITIES – Forests and Woodlands – continued*** | | | | |
| **Unoccupied raptors nests** | No specific limitations on treatments associated with maintaining habitat around unoccupied raptor nests. | Maintain a 0.25 mile buffer (~125 acres) of suitable habitat around unoccupied nests for 5 years. Less restrictive than Alt. C but more so than Alts. A and D. | Maintain a 0.5 mile buffer (~500 acres) of suitable habitat around unoccupied nests for 7 years. Most restrictive of all alternatives. | Maintain a 0.25 mile buffer (~125 acres) of suitable habitat around unoccupied nests for 3 years. Least restrictive of the action alternatives. |
| ***Noxious weeds*** | | | | |
| **Potential spread** | Management under Alt. A could result in the lowest rate of potential weed spread, though infested acres could still increase (43,000 acres by 2015). | Management under Alt. B could result in the third lowest rate of potential weed spread (48,000 acres by 2015). | Management under Alt. C could result in the highest rate of potential weed spread (51,000 acres by 2015). | Management under Alt. D could result in the second lowest rate of potential weed spread (47,000 acres by 2015). |
| **Weed spread contributions** | Open and limited roads and trails would contribute 13 acres/year, grassland treatments 66 acres/year, forest treatments 38 acres/year, and riparian treatments would be negligible contributors. | Open and limited roads and trails would contribute 9 acres/year, grassland and shrubland treatments 193 acres/year, forest treatments 93 acres/year, and riparian treatments would be negligible contributors. | Open and limited roads and trails would contribute 8 acres/year, grassland and shrubland treatments 34 acres/year, forest treatments 27 acres/year, and riparian treatments would be negligible contributors. | Open and limited roads and trails would contribute 10 acres/year, grassland and shrubland treatments 323 acres/year, forest treatments 116 acres/year, and riparian treatments 9 acres/year. |
| | Spread from wildfire is not included in the increased acres, and wildfire risk is greater than Alts. B and D but less than Alt. C. | Spread from wildfire is not included in the increased acres, and wildfire risk is greater than Alt. D but less than Alts. A and C. | Spread from wildfire is not included in the increased acres, and wildfire risk is the greatest under this alternative. | Spread from wildfire is not included in the increased acres, and wildfire risk is the least under this alternative. |
| **Oil and gas development** | Weed spread from oil and gas development would be similar to Alt. B, greater than Alt. C, and less than Alt. D. | Weed spread from oil and gas development would be similar to Alt. A, greater than Alt. C, and less than Alt. D. | Weed spread from oil and gas development would be least under this alternative. | Weed spread from oil and gas development would be greatest under this alternative. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| **Lakeside Camping** | Weed spread from camping on Holter and Hauser Lakes would be greater than Alts. B and C but the same as Alt. D. | Weed spread from camping on Holter and Hauser Lakes would be greater than Alt. C but less than Alts. A and D. | Weed spread from camping on Holter and Hauser Lakes would be least under this alternative. | Same as Alt. A. |
| **Grassland and Shrubland treatments** | Grassland treatments could result in up to 4,000 acres/decade of weed resistant plant communities. No shrubland treatments are anticipated. | Grassland and shrubland (combined) treatments could result in up to 12,000 acres/decade of weed resistant plant communities. | Grassland and shrubland (combined) treatments could result in up to 2,000 acres/decade of weed resistant plant communities. | Grassland and shrubland (combined) treatments could result in up to 19,000 acres/decade of weed resistant plant communities. |
| **Aerial treatment restrictions** | Aerial treatment restrictions would result in greater costs per mile of riparian treatments than Alt. D, but less than Alts. B and C. | Aerial treatment restrictions would result in greater costs per mile of riparian treatments than Alts. A and D, but less than Alt. C. | Aerial treatment restrictions would result in the greatest costs per mile of riparian treatments. | Aerial treatment restrictions would result in the least cost per mile of riparian treatments. |
| ***Riparian types*** | | | | |
| **Riparian protection** | SMZs provide protection to water quality, streambank stability, down woody material and shade by restricting certain forest activities on 3,528 acres. | Increased stream shading, increased down woody material recruitment, and wider vegetative "filters" to prevent eroded sediment from reaching streams on 5,312 acres in RMZs. | Increased stream shading, increased down woody material recruitment, and wider vegetative "filters" to prevent eroded sediment from reaching streams on 11,393 acres in RMZs. | Same as Alt. A. |
| **Riparian restoration** | Mechanically treating 30 acres per decade would require the longest timeframe to restore riparian vegetation communities to proper functioning condition. | Mechanically treating up to 700 acres per decade would require the second shortest timeframe to restore riparian vegetation communities to proper functioning condition. | Would require second longest timeframe to restore riparian vegetation communities to proper functioning condition at up to 200 acres per decade of mechanical treatments. | Treating up to 1,700 acres per decade, could allow the shortest period required to restore riparian vegetation communities to proper functioning condition of all alternatives. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***VEGETATION COMMUNITIES – Riparian types – continued*** | | | | |
| **Noxious weeds** | Adhering to application standards during aerial spraying, including a 200' buffer along riparian areas, would protect untargeted riparian vegetation. | Adhering to application standards during aerial spraying would protect untargeted riparian vegetation, though there would be more risk of inadvertent herbicide application given the minimum buffer of 100 feet in riparian areas. Cost of treating weeds and risk of noxious weed spread in riparian areas would be less than Alternatives A or C. | Least risk of inadvertent herbicide application to untargeted riparian vegetation, since no aerial spraying is allowed, but least progress in minimizing weeds in these habitats. Cost of treating weeds would be the highest of all alternatives. | Adhering to application standards during aerial spraying would protect untargeted riparian vegetation. Alt. D would allow flexibility in weed control options based on 100 foot application buffer in riparian areas, and thus potential to better control weed infestation and spread. Low cost of treatment like B, but greater risk of inadvertent herbicide application than Alts. A and C. |
| **Special designations** | Some protection of riparian vegetation from potential future land use disturbances such as utility corridors, timber harvest, or mining since 12 river miles would be managed to maintain WSR eligibility. | Increased protection of riparian vegetation over Alt. A since 5.7 miles of river/stream segment recommended for WSR designation. | Most protection of riparian vegetation of all alternatives since 12 miles of river/stream recommended suitable for WSR designation. Additional 14 riparian acres in ACEC designation (Spokane Creek). | Least protection of riparian vegetation of all alternatives since no rivers recommended for WSR designation. Spokane Creek ACEC would not be designated. |
| **Lands and realty** | No mineral withdrawal proposed for Muskrat Creek | Same as Alts. A and D. | Muskrat Creek's sensitive riparian values and vegetation protected from potential mining impacts by 180 acre withdrawal. | Same as Alts. A and B. |
| **Mine-Related Road construction** | No provisions in place for restricting mine-related roads in riparian areas. | Reduced impacts to riparian vegetation from Alt. A by not allowing mining roads and facilities in riparian areas unless no other option exists. | Least impacts of all alternatives since no mining-related road or facilities allowed in riparian areas. | Same as Alt. A. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| **Oil and gas leasing** | Disturbance of riparian vegetation limited by NSO within 500 feet of reservoirs, lakes, ponds, and intermittent streams. Disturbance of riparian vegetation limited by NSO within 1,000 feet of perennial streams and rivers. | Similar protection as Alt. A for reservoirs, lakes, ponds, and intermittent streams due to flexibility under Standard Lease Terms to move facilities up to 656 feet. Slightly less protection of vegetation along perennial streams and rivers compared to Alt. A due to lack of 1,000 foot NSO stipulation but still with flexibility to move facilities up to 656 feet. | Same as Alt. B. | Same as Alt. B. |
| ***WILDLIFE*** | | | | |
| **Dry forest habitats** | Alt. A would restore fewer acres (up to 5,100 acres/decade) of habitat for those species that depend on dry forest types than Alts. B and D but could restore up to 300 acres more per decade than Alt. C. | Alt. B would restore more habitats for species that depend on dry forest types (up to 14,750 acres/decade) than Alts. A and C but 3,450 acres less per decade than Alt. D. Alternative B would have fewer short-term adverse effects on wildlife than Alt. D. | Alt. C would restore the fewest acres of dry forest types (up to 4,800 acres/decade) of all alternatives. Alt. C would have the fewest short-term adverse effects on wildlife from disturbance and road construction. | Alt. D would restore the most acres of dry forest types (up to 18,200 acres/decade) of all alternatives and considerably improve habitat for a variety of wildlife species. Alt. D would have the most short-term adverse effects on wildlife from disturbance and road construction. |
| **Cool, moist forest habitats** | Alt. A would restore fewer acres (up to 2,400 acres) of habitat for those species that depend on cool, moist forests than Alts. B and D but could restore up to 1,850 acres more per decade than Alt. C. | Alt. B would restore more habitat for cool forest species (up to 3,750 acres/decade) than Alts. A and C but up to 1,300 acres less than Alt. D. Alt. B would have fewer short-term adverse effects to wildlife than Alt. D. | Alt. C would restore the fewest acres of cool forest (up to 550 acres/decade) of all alternatives. Alt. C would have the fewest short-term adverse effects on wildlife of all the alternatives. | Alt. D would restore the most acres of cool forest (up to 5,050 acres/ decade) of all alternatives and improve more habitat for a variety of wildlife species. Alt. D would have the most short-term effects on wildlife from disturbance and road construction. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***WILDLIFE – continued*** | | | | |
| **Snag management** | Alts. A and D would not provide retention guidelines for snag and down woody habitat and would not proactively create snags in snag deficient areas. Alts. A and D would protect less snag habitat than Alts. B and C. | Alts. B and C would both use the same protocol to identify the range of natural variability for retention or creation of snags. Unlike Alts. A and C, Alt. B would actively create snags in snag deficient areas. | Alternative C could create less snag habitat over long-term than Alt. B due to opportunistic snag creation rather than active management. | Same as Alt. A. |
| **Timber Salvage** | Alt. A would have no restrictions on the number of acres or size of trees removed with timber salvage. Under Alt. A, snag habitat and down wood, which provides breeding and foraging for a variety of species, would decline more rapidly than under the action alternatives. | Contiguous blocks of dead and dying forest would be retained in adequate amounts during timber salvage under Alt. B. Alt. B would retain more habitat for species dependent on dead and dying forests compared to Alts A and D but less than Alt. C. | By retaining 50 percent of dead and dying forest during salvage where these areas exceed 1,000 acres, Alt. C would ensure the most acres available to species dependent on snag habitat. Alt. C would ensure breeding and nesting habitat is available in adequate amounts to maintain viability of species dependent on this habitat type. | Alt. D would retain fewer acres of dead and dying forest (30 percent in areas that exceed 1,000 acres) during salvage compared to Alt. B and, especially, Alt. C. This would ensure that some habitat is maintained for species dependent on dead and dying forest but may not ensure the long-term viability of these species. |
| **Firewood cutting** | Alt A would have no restrictions on the size of snags taken or where snags are removed. This would reduce breeding and foraging habitat for many species more than the action alternatives. | Restricting the size of snags taken would protect more breeding and nesting habitat than Alt. A but less than under Alt. C. | Alt. C would protect more snag and down woody habitat of all alternatives by only allowing firewood cutting in designated areas to meet resource objective and only allowing trees <20” DBH to be removed. | Same as Alt. B. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| **Grassland/Shrubland habitats** | Unlike the action alternatives, Alt. A only proposes treating grasslands (up to 5,250 acres/decade) and not sagebrush. Alt. A would restore fewer acres of grassland and shrublands for those species that depend on these habitat types compared to Alts. B and D but could restore up to 3,250 more grassland acres per decade than Alt. C. | Alt. B would restore and enhance considerably more habitat for grassland and shrubland species (up to 15,450 acres/decade) than Alts. A and C but up to 10,400 acres less than Alt. D. However, Alt. B would have fewer short-term adverse effects to wildlife than Alt. D. | Alt. C would restore the fewest acres of grassland (up to 2,000 acres/decade) of all alternatives and less shrubland (up to 750 acres/decade) than Alts. B and D but more than Alt. A. Alt. C would restore considerably fewer acres of grassland/shrubland habitats than Alts. B and D causing a decline in the quality and quantity of habitat for grassland and sagebrush species. Alt. C would have the fewest short-term adverse effects on wildlife of all the alternatives. | Alt. D would restore and enhance the most acres of grassland/shrubland (up to 25,850 acres/decade) of all alternatives and improve more habitats for grassland/shrubland species. Alt. D, however, would have the most short-term adverse effects on wildlife from disturbance and temporary road construction. |
| **Firewood cutting in Riparian Areas** | With no restriction on firewood cutting in riparian areas, Alt. A would have the most detrimental effects to riparian species from the loss of breeding and nesting habitat. | Alt. B would maintain more breeding and nesting habitat in riparian areas by restricting firewood cutting within 100 feet of live streams and within 50 feet of intermittent streams. | Alt. C would provide the greatest protection to breeding and nesting riparian wildlife species of all alternatives by not allowing firewood cutting within 200 feet of live streams and within 100 feet of intermittent streams. | Same as Alt. B. |
| **Riparian habitat protection** | Under Alts. A and D, riparian areas would be given a minimum amount of protection through the use of SMZs. SMZs allow activities such as logging, prescribed fire, and road building in riparian areas (50 feet on either side of a stream) but restricts how many trees can be removed and where road construction can occur. | Alts. B and C would establish riparian management zones (RMZs) where all activities would have to meet riparian goals and objectives. The RMZ width would vary depending on the type of stream (80 feet for perennial streams and 160 feet for fish bearing streams). | Alt. C would ensure the best protection of riparian and stream habitats by requiring all activities with 150 feet of perennial and 300 feet of fish bearing streams meet riparian goals and objectives. Alt. C would protect more riparian habitat for terrestrial species than all other alternatives. | Same as Alt. A |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***WILDLIFE – Riparian habitat protection – continued*** | | | | |
| | SMZs provide limited protection to overall riparian function and habitat diversity to terrestrial species. By focusing dead and live tree retention within the first 50 feet of stream and by allowing smaller diameter trees to be retained (down to 8 inches DBH), SMZs would limit wood recruitment to streams, reduce habitat for foraging and breeding (less vegetation and smaller diameter snags retained), reduce hiding and brood rearing habitat as well as limit effective wildlife movement corridors. | The emphasis in riparian and stream functions along with wider RMZs would ensure that riparian habitat is maintained along streams not only for water quality and aquatic habitat but also for the numerous terrestrial wildlife species that use riparian areas for breeding, foraging and hiding as well as for movement corridors. | | |
| **Noxious weeds** | Continued degradation of grassland, shrubland, riparian and forested habitats with a reduction in forage, hiding cover, and vegetative diversity due to the fewest acres treated of all alternatives.<br>Alt. A would provide more protection to non-target vegetation compared to Alt. D by not allowing aerial spraying within 200 feet of streams. | Assuming implementation of the high end of proposed weed treatment acres, Alt. B would treat more weeds than Alts. A and C but less than D. Alt. B would restore more habitat than Alts. A and C but less than D. Alt. B would provide the same protection from non-target species as Alt. D by not allowing aerial spraying within a minimum of 100 feet of streams. | Assuming implementation of the high end of proposed weed treatment acres, Alt. C would treat and restore more acres of weeds than Alt. A but substantially less than Alts. B and D. Alt. C would provide the most protection of non-target vegetation of all alternatives by not allowing aerial spraying. Alt C could allow weed infestation to rapidly spread in hard to access sites by not allowing aerial spraying. | Assuming implementation of the high end of proposed weed treatment acres, Alt. D would restore more habitats for a diversity of species compared to the other alternatives by reducing noxious weed infestations. Alt. D would protect the least amount of non-target vegetation by allowing aerial spraying within 100 feet of streams. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| **Livestock grazing** | Alt. A would have more acres available to livestock grazing than Alts. B and C (273,000) and the same as Alt. D. Alternatives A and D could have more negative effects due to competition between livestock and big game for forage, spread of noxious weeds, decrease in quality and quantity of grassland/shrubland habitat and loss of riparian habitat than Alts. B and C. | Alt. B would reduce the existing acres available for livestock grazing to 265,000 acres and potentially increase the quality and quantity of habitat for big game as well as nesting and foraging habitat for a variety of grassland/shrubland and riparian species compared to Alts. A and D. Annual maintenance of exclosures would ensure riparian areas are not degraded from livestock grazing or trampling. | Alt C would allow the fewest acres of livestock grazing (262,000 acres) compared to all other alternatives. This would benefit the most wildlife species by reducing competition for forage, reducing disturbance, preventing spread of weeds, protecting riparian areas, and protecting nesting and cover habitat. Annual maintenance of exclosures would ensure riparian areas are not degraded from livestock grazing or trampling. | Same as Alt. A on allowable acres for livestock grazing but more effects from reduced maintenance of livestock exclosures expected (exclosures to be maintained every 5 years). However, damaged and non-functional exclosures could allow access to riparian areas and streams between 5 year maintenance intervals. Due to this, Alternative D would provide less protection to riparian areas than Alternatives B and C. |
| **Bighorn sheep management** | For new sheep/goat allotments or conversions from cows to sheep/ goats, although Alts A and D would allow for a buffer of up to 9 miles between wild and domestic sheep, these alternatives would not have a minimum buffer width. These Alts. would not guarantee adequate separation between wild and domestic sheep to prevent disease transmission.<br>Alt. A would not provide specific guidance when using domestic sheep for weed control in occupied bighorn sheep habitat. This could allow for disease transmission to wild sheep during weed control activities. | For new sheep/goat allotments or conversions from cows to sheep/ goats, Alt. B would require a minimum buffer width of 5 miles between wild and domestic sheep populations to reduce the potential for diseases to be passed from domestic to bighorn sheep.<br>Alts. B and C would not allow new sheep or goat allotments in occupied bighorn sheep habitat to protect wild sheep from disease transmission.<br>Alts. B, C, and D would restrict when and for how long domestic sheep could be used for weed control adjacent to occupied wild sheep habitat. | For new sheep/goat allotments or conversions from cows to sheep/ goats, Alt. C would have the greatest protection to bighorn sheep from disease transmission and competition of resources due to the largest mandatory buffer (9 miles) between wild and domestic sheep. Alt. C would also have the most restrictions on when domestic sheep could be used for weed control and would not allow new sheep or goat allotments in occupied bighorn sheep habitat. | For new sheep/goat allotments or conversions from cows to sheep/ goats, Alt. D would have the same direction for a buffer between domestic sheep and goat allotments and wild sheep habitat as Alternative A, but would have the same restrictions as Alt. B for the use of domestic sheep and goats during weed control adjacent to wild sheep habitat. Alt D would protect bighorn sheep from disease slightly more than Alt. A but considerably less than Alts. B and C. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***WILDLIFE – continued*** | | | | |
| **Fire Management** | Alts. A and D would have more mortality to nesting migratory and resident birds compared to Alts. B and C because there would be no timing restrictions during prescribed burning or mechanical treatments. | Alt. B would reduce mortality to nesting birds, including migratory and resident birds, by excluding the use of fire during the breeding season.<br>Because mechanical treatments would not have timing restrictions, there could be impacts to breeding birds from implementation during the breeding season. Alt. B would protect breeding birds and prevent more mortality than Alts. A and D but less than Alt. C. | Alt. C would prevent the most mortality to migratory and resident breeding birds by restricting both prescribed fire and mechanical treatments during the breeding season. | Same as Alt. A. |
| **Travel management** | Alt. D would have the most miles of open yearlong roads (471.8 miles) of all alternatives. Alt. D would have the most detrimental effects on wildlife from disturbance or loss of habitat for overwintering, breeding, and migrating wildlife. Alt. A would have more roads that could cause direct mortality through road kill, prevent wildlife movement, create disturbance, cause spread of noxious weeds, and cause habitat fragmentation across the landscape.<br>Alt. A would have more detrimental effects to wildlife from cross-country snowmobile use | Alt. B would have substantially fewer detrimental effects to wildlife from open yearlong roads (263 miles) compared to Alt. A. Alt. B would also have fewer negative effects to wildlife from loss of habitat, road kill, disturbance and fragmentation of habitat than Alt. D but more than Alt. C.<br>Alt. B would have considerably fewer acres available for cross-country snowmobile use | Alt. C would have the least negative effects to wildlife from open roads because no new permanent roads would be constructed for forest treatments and because Alt. C would have the most closed and seasonally restricted roads. Alt. C would have 244.3 miles of open yearlong roads, considerably less than Alts. A and D and 13.3 miles less than Alt. B.<br>Alt. C would have substantially fewer detrimental effects to wildlife from cross-country | Alt. D would improve wildlife habitat and reduce disturbance over Alt. A with 304.8 miles of open yearlong roads but would restore much fewer acres and allow considerable disturbance over Alts. B and C.<br>Alt. D would allow 139,138 acres to be open to cross country snowmobile use, considerably |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| | on 143,206 acres compared to the other alternatives. Alt A would allow more harassment of wildlife during seasons of high stress. This could lead to individuals leaving an area and/or cause an increase in stress that could lead to mortality. | (112,682 acres) compared to Alt. A. Alt B would protect more wildlife from harassment and stress due to snowmobile use than Alts A and D but substantially less than Alt. C. | snowmobile use of all alternatives. Alt C would allow cross-country snowmobile use on 26,148 acres. | more than Alts. B and C, but 4,068 acres less than Alt. A.<br>Alt. D would have the greatest negative effects from harassment, displacement and an increase in stress to wildlife from snowmobile use of the action alternatives, but would have fewer effects than Alternative A. |
| **Big game winter range habitat** | Actual road densities in winter range for Alt. A would be greater than 1 $mi/mi^2$ in all five travel plan areas being analyzed in RMP. Road densities above 1 $mi/mi^2$ can have substantial detrimental effects to big game through loss of habitat, disturbance, an increase in stress, and an increase in vulnerability to direct mortality (road kill and hunting).<br>No minimum size of unroaded forested habitats identified to be protected as big game security habitat under Alt. A. Based on existing blocks of security habitat 250 acres or greater in size, Alt. A would provide 5,846 acres of security habitat Decision Area-wide. | Alt. B would provide greater protection and larger blocks of effective big game habitats than Alts. A and D by having road densities below 1.0 $mi/mi^2$ in winter range of all five travel plan areas being analyzed. Alt. B would further protect big game habitat over Alts. A and D by restricting new road construction in areas where open road densities are 1.0 $mi/mi^2$ or less.<br>Alt. B would have substantially more functional big game security habitat than Alt. A by retaining blocks (>250 acres) of forested habitats as unroaded or with closed roads during the hunting season. Alt. B would provide 8,510 acres of security habitat Decision Area-wide. | Alt. C would provide the most protection and the largest blocks of effective big game habitat of all alternatives by reducing road densities within winter range in all five travel plan areas to 0.8 $mi/mi^2$ or less. Alt. C would further protect big game habitat more than all other alternatives by restricting new road construction in areas where open road densities are 1.5 $mi/mi^2$ or less.<br>Alt. C would ensure the greatest amount of functional big game security habitat of all alternatives by retaining blocks (>250 acres) as unroaded or with closed roads during the hunting season. Alt. C would provide 10,946 acres of security habitat Decision Area-wide. | Alt. D would create larger blocks of big game habitat over Alt. A, but fewer acres compared to Alts. B and C. Road densities within winter range of the five travel plan areas being analyzed would be 1.2 $mi/mi^2$ or less. Alt. D would continue to reduce effective big game habitat because new road construction would be restricted in areas where open road densities are 0.5 $mi/mi^2$ or less.<br>Alt. D would provide more security habitat than Alt. A, but less than Alts. B and C. Alt. D would provide 7,007 acres of security habitat Decision Area-wide. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***WILDLIFE – continued*** | | | | |
| **Wildlife movement corridors** | Habitat fragmentation and isolation of populations as a result of degradation of movement corridors can result in small, vulnerable populations. Disturbance related to high road density within wildlife corridors can degrade the quality of wildlife corridors, eventually making them unavailable to wildlife species that depend on them.<br>Alt. A would have the fewest acres of wildlife movement corridors with low road densities (99,137 acres). | Alt. B would substantially improve the quality of wildlife movement corridors over Alt. A by increasing the acreage with low road densities to 114,086 acres. | Alt. C would provide the most connectivity and the least amount of habitat fragmentation of all alternatives by providing the most acreage with low road densities in wildlife movement corridors at 117,469 acres. | Alt. D would have the least amount of connectivity and the lowest quality movement corridors (109,796 acres with low road densities) compared to Alts B and C, but would have higher quality corridors compared to Alt. A. |
| **Special designations** | Alt. A would continue management of the Sleeping Giant ACEC but would not propose any new ACECs. Under Alt. A, WSAs would revert back to multiple use management if not designated as wilderness. If the existing MOU in the Elkhorn Mountains is withdrawn, this area would also revert to multiple use management. Alt. A would have the fewest acres managed for wildlife goals and objectives through the special designations compared to all other alts. | Alt. B would propose four ACECs. The two new ACECs that would benefit wildlife the most under Alt B would be Humbug Spires and, especially, Elkhorns. If the WSA designation is withdrawn for Humbug Spires, the ACEC would ensure habitat for many dry forest, riparian and cliff species would be protected in this unique area.<br>The Elkhorn ACEC would consist of 50,431 acres in and around the Elkhorn Mountains but would exclude the Limestone Hills National Guard Training Area, Radersburg motorized play area and small iso- | Under Alt. C, the benefits to wildlife from ACECs would be similar to Alt. B with the exception of the Elkhorn ACEC. Under Alt. C, the Elkhorn ACEC would consist of all BLM lands in and around the Elkhorns (67,665 acres). Alt. C would ensure that all BLM acres in the Elkhorn Mountains would be managed over the long-term specifically for wildlife. | Alt. D would propose new ACECs. The Humbug Spires ACEC would be the same as Alts B and C. Under Alt. D, the Elkhorn ACEC would only include the existing WSA boundary (3,575 acres). This would be substantially different from Alts. B and C. If the existing MOU is withdrawn under Alt. D, the majority of BLM lands in the Elkhorn Mountain Range would revert to multiple use management. This would be detrimental to wildlife in this unique area. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| | | lated parcels along the western boundary.<br>This ACEC would have long-term benefits to wildlife by focusing management specifically for wildlife. Substantially more acres would be proposed under this alternative than under Alt. D. | | |
| **Recreation** | No food storage restrictions would be in place at recreation sites to protect bears from being moved or destroyed. | Alt. B would protect bears from being moved or destroyed by implementing food storage restrictions at recreation sites. | Same as Alt. B. | Same as Alt. A |
| **Oil and gas leasing** | All big game winter and calving habitat in the five areas with most potential for oil and gas development would be protected with timing restrictions. Timing restrictions would be the same for Alt. A, B, and D in big game winter/spring habitat. Timing restrictions would allow habitat to be lost and would allow some disturbance to big game during development.<br>Wildlife management areas (state lands) would be the most protected of the action alternatives with NL and NSO stipulations. | Alt. B would use NSO to protect wildlife management areas (same as Alt. D) and in bighorn sheep core habitat. Alt. B would ensure habitat is not lost and sheep not disturbed in core areas. This is more protective than Alts. A and D.<br>Alt. B would also use timing restriction in other big game habitats (calving/birthing areas) but they would be more restrictive than under Alts. A and D. This would give big game more refuge during the calving season and also reduce stress during the winter and spring seasons. | Alt. C would provide complete protection to big game from loss of habitats or disturbance by using a NL stipulation in big game habitat and in wildlife management areas. | Alt. D would be similar to Alt. A and Alt. B in protecting big game.<br>This Alt. would provide more refuge to bighorn sheep by having a longer time restriction during the winter and spring than Alt. A. Alt. D would have less protection to bighorn sheep than Alts B and C only using a timing restriction in core habitat. Timing restrictions would allow habitat to be lost and would allow disturbance to bighorn sheep core habitat during development. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***FISH*** | | | | |
| **Riparian Function** | Under Alt. A and D, riparian areas would be given a minimum amount of protection through the use of SMZs. SMZs allow activities such as logging, prescribed fire, and road building in riparian areas (generally 50 feet on either side of a stream) but restricts how many trees can be removed and where road construction can occur.<br><br>Although this would provide some protection to streams, the loss of riparian vegetation and soil disturbance could cause negative impacts to streams from increased runoff, loss of large woody material, loss of riparian vegetation and sedimentation. | Alts B and C would establish riparian management zones (RMZs) where all activities would have to meet riparian goals and objectives. The RMZ width would vary depending on the type of stream (80 feet for perennial streams and 160 feet for fish bearing streams).<br><br>The emphasis in riparian and stream functions along with wider RMZs would ensure that riparian and stream habitats and functions are maintained for the long-term. | Alt. C would ensure the most protection of riparian and stream habitats by requiring all activities with 150 feet of perennial and 300 feet of fish bearing streams meet riparian goals and objectives. Alt. C would protect more riparian habitat for aquatic species than all other alternatives. | Same as Alt. A |
| **Wildland fire suppression** | Alts. A and D would not require fish screens when removing water during fire suppression. This could cause direct mortality of fish. | Alt. B would prevent mortality to fish by requiring fish screens are used when removing water from streams. | Same as Alt. B. | Same as Alt. B. |
| **Watershed function** | Watersheds with the highest road densities often have lower quality and less functional habitat available for fish. Alt A would have the most BLM acres with high road densities (>2 mi/mi$^2$) of all alternatives (107,566 acres). | Alt. B would improve the overall function of watersheds and the quality of fish habitat by reducing acres with high road densities to 87,729 acres compared to Alt. A. Alt B would have fewer acres with high road densities compared to Alt. D but more than Alt. C. | Alt. C would substantially improve overall watershed functions and aquatic habitats by having the fewest acres with high road densities of all alternatives (81,196 acres). | Alt D would improve watershed functions more than Alt. A with 95,481 acres in high road densities but would allow more detrimental effects to aquatic habitats from high road densities compared to Alts. B and C. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| **Riparian roads** | Road crossings and roads that are adjacent to streams can result in loss of riparian vegetation, loss of large woody material to streams, increased sedimentation, direct stream channel alteration, and barriers to fish movement. Alt. A would have the most miles of open roads in riparian areas (94.3 miles) of all alternatives. | Alt. B would allow improvement in riparian vegetation and decrease sedimentation and runoff to streams more than Alts. A and D with 77.4 miles of open roads in riparian areas. | Alt. C would have the greatest benefit to fish and aquatic habitats by having the most miles of closed roads in riparian areas by decreasing the amount of open road miles to 73.7. | Alt. D would improve aquatic and riparian habitats more than Alt. A, but not as much as Alts. B and C by having 81.2 miles of open roads in riparian areas. |
| **Lands and realty** | Alt. A would not protect the genetically pure westslope cutthroat trout population in Muskrat Cr. with a 180 acre mineral withdrawal.<br>Mining in and along Muskrat Cr. could cause a loss of riparian vegetation, streambed and bank destabilization, erosion and sedimentation and alteration of floodplain and stream morphology. Alt. A could allow crushing or disturbance of gravels during spawning and when eggs are incubating/hatching. If mining operations cause a decline in this population, the population may no longer be able to function as a donor source of fish for MT and may impede long-term restoration efforts. | Same as Alt. A. | Alt. C would provide long-term protection of riparian and aquatic habitats for the restored population of westslope cutthroat trout in Muskrat Creek from the negative effects of mining (including placer mining) on aquatic and riparian species through a 180 acre mineral withdrawal.<br>Alt. C would ensure long-term protection to the newly restored westslope cutthroat trout population in Muskrat Creek from the direct detrimental effects of mining (including placer mining) by implementing a 180 acre mineral withdrawal. | Same as Alt. A. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***FISH – continued*** | | | | |
| **Special designations** | Alt. A would protect the least amount of fish bearing stream (11.4 miles) through ACEC designations.<br>No streams would be recommended for WSR but management would protect ORVs on all four eligible segments (12 miles). | More protective of fish-bearing streams with 30.6 miles in ACEC designations. More protection to fish and aquatic resources than Alts. A and D with two eligible segments (5.7 miles) recommended for WSRS. | Most protective of fish-bearing streams with 32.9 miles in ACEC designations. More protective than Alt. B because of additional miles in Elkhorns ACEC designation. Most protection to fish and aquatic resources from WSRS with four segments (12 miles) recommended as suitable. | More miles of fish-bearing streams in ACEC designations than Alt. A (21.5 miles), but less than Alts. B and C.<br>No eligible WSRs would be recommended as suitable. |
| ***SPECIAL STATUS SPECIES*** | | | | |
| ***Wildlife*** | | | | |
| **Raptors** | Under Alt A, there would be no restrictions on projects around active raptor nests.<br>No unoccupied raptor nest sites would be protected from loss of habitat. | Alt. B could prevent more raptors from abandoning nests due to noise and project implementation than Alts. A and D with a 0.5 mile noise disturbance buffer.<br>Enhanced protection and recruitment of raptors through protection of unoccupied nests for 5 years and retention of suitable habitat within 0.25 mile radius. | Alt. C would prevent more raptors from abandoning nests compared to all other alternatives with a 1 mile noise disturbance buffer.<br>Substantial protection to raptors due to a 0.5 mile buffer around unoccupied nests and protection for 7 years. | Alt. D would have a smaller buffer around raptor nests (0.25 mile) and would have more detrimental effects to raptors than Alts. B and C but less than Alt. A.<br>Less protection than Alts. B and C due to a 0.25 mile buffer around unoccupied nests and protection for 3 years. |
| **Bald eagles** | There is no identified management for restoration of bald eagle nest and roost sites. | Alt. B would treat vegetation around bald eagle nest and roost sites to protect nest trees from fire and promote development of nest trees. | Same as Alt. B. | Same as Alt. A. |
| **Grizzly bear habitat** | Road densities and open roads can impact the quality and quantity of grizzly bear habitat. | Closing roads under Alt. B would minimize the negative impacts on bears related to | Alt. C would provide the largest blocks of effective grizzly bear habitat of all alternatives | Although Alt. D would provide better quality habitat for grizzly bears than Alt. A, road densi- |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| | Grizzly bears underutilize habitat near roads and other human activities. MFWP recommends that land management agencies manage for an open road density of 1 mi/mi$^2$ or less in occupied grizzly bear habitat. Alt. A would have the lowest quality and the least amount of functional grizzly bear habitat compared to the other alternatives with a road density of 2.4 mi/mi$^2$ in occupied grizzly bear habitat. | disturbance and interactions with humans more than under Alts. A and D but less than under Alt. C. Alt. B would have a road density of 0.8 mi/mi$^2$ in occupied grizzly bear habitat. Alts. B and D would maintain functional habitat by restricting new, permanent roads in areas where open road densities are 1.0 mi/mi$^2$ or less. | by reducing road densities to 0.6 mi/mi$^2$ in occupied grizzly bear habitat and by restricting new, permanent roads in areas where open road densities are 1.5 mi/mi$^2$ or less. | ties would still be above the 1 mi/mi$^2$ (1.3 mi/mi$^2$) recommended by MFWP. Alt. D would provide lower quality and less functional habitat for grizzly bear than Alts. B and C. |
| **Oil and Gas leasing** | Alts. A and D would have CSU for grizzly bear and gray wolf and would not ensure protection from disturbance or loss of habitat from oil and gas exploration and development.<br>Alts. A, B and D would have similar protections from NSO or TL to prairie dog towns, sage grouse winter and spring range and bald eagle nest sites.<br>Sage grouse would be the least protected under Alt. A with TL of 0.25 mile radius of leks. | Grizzly bear in the recovery zone would be completely protected from disturbance and habitat loss with a NSO but bears in the distribution zone would only be protected from disturbance in the spring and fall.<br>Gray wolf den sites would be protected from disturbance but not from loss of habitat.<br>Alts B and D would give peregrine falcons more protection from disturbance and loss of habitat than with Alts. A.<br>Sage grouse leks would be completely protected from disturbance during the breeding season under Alts. B and D but habitat could be lost. | Grizzly bear, gray wolf, sage grouse, bald eagle, peregrine falcon, and ferruginous hawk would all be protected from disturbance and loss of habitat with NSO or NL under Alt. C.<br>Sage grouse leks would be completely protected from disturbance and habitat loss under Alts. C with a 3 mile NSO. | Alts. A and D would have CSU for grizzly bear and gray wolf and would not ensure protection from disturbance or loss of habitat from oil and gas exploration and development. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***SPECIAL STATUS SPECIES – continued*** | | | | |
| ***Fish*** | | | | |
| **Westslope cutthroat trout** | No emphasis on which westslope cutthroat trout populations should be restored.<br><br>No management emphasis to remove non-native species that out-compete or breed with westslope cutthroat trout. | Alt. B could cause an expansion in population by emphasizing restoration of genetically pure and <20 percent hybridized westslope cutthroat trout and their habitats.<br><br>Alts. B and C would prevent the loss or degradation of westslope cutthroat trout populations by removing non-native species that outcompete or breed with westslope cutthroat trout. | Alt. C would allow the greatest amount of population expansion by emphasizing restoration of all westslope cutthroat trout populations and their habitats, regardless of the degree of hybridization.<br><br>Same as Alt. B. | Alt. D would allow the least amount of population expansion of the action alternatives by emphasizing restoration of genetically pure and <10 percent hybridized westslope cutthroat trout and their habitats.<br><br>Same as Alt. A. |
| **Oil and gas leasing** | Alt. A would provide the least amount of protection to aquatic species with NSOs up to 0.25 mile for westslope and Yellowstone cutthroat trout and Arctic grayling, and a CSU for bull trout. | NSO within 0.5 mile of streams would protect westslope and Yellowstone cutthroat trout, Arctic grayling, and bull trout. | Greatest amount of protection of all alternatives to westslope and Yellowstone cutthroat trout, Arctic grayling, and bull trout with NSO or No Lease within 0.5 mile of streams. | Alt. D would provide more protection over Alt. A with 0.5 mile CSU or NSO but less protection than under Alts. B or C. |
| ***Plants*** | | | | |
| **Noxious Weeds** | Under the worst case scenario analysis assumptions, Alt. A would have the fewest acres of noxious weed spread (43,000) of all alternatives, placing the least amount of habitat at risk. | Under a worst case scenario, Alt. B would have the second highest acres of spread (48,000) of all alternatives, putting more special status plant habitat at risk. | Under a worst case scenario, Alt. C would have the most acres of weed spread (51,000) of all alternatives, placing the most habitat at risk. | Under a worst case scenario, Alt. D would have fewer acres of weed spread (47,000) than Alts. B and C, putting less habitat at risk than the other action alternatives. |
| **OHV** | Most motorized use activity and miles of open road, placing the most habitat at risk. | Less motorized use activity than Alts. A and D, lesser impacts on special status plant habitat. | Least motorized use activity of all alternatives, posing the least impacts on habitat. | Less motorized use activity than Alt. A, but more than Alts. B and C. More potential habitat impacts than other action alternatives. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| **Riparian buffers** | SMZs would limit disturbance to Idaho sedge and small yellow lady's slipper habitat. | RMZs would provide greater buffers than SMZs and also buffers for non-forested species such as mealy primrose, Ute ladies' tresses and dwarf purple monkeyflower. | Largest RMZ buffer for riparian species, protecting riparian and some upslope special status plants the most of all alternatives. | Same as Alt. A. |
| **Dry forest tree, shrub, grass treatments** | Less habitat treated than Alts. B and D. Potential short-term adverse effects due to ground disturbance would be less, as would potential long-term benefits of treatments than Alts. B and D. | Treatments to restore dry forest, shrub, and grass habitat higher than Alts. A and C. Greater potential short-term adverse effects due to ground disturbance, but greater long-term benefits than Alts. A and C. | Fewest acres of habitat treatments of all alternatives. Fewer potential short-term adverse effects along with fewer long-term benefits of all alternatives. | Most acres of habitat treatment of all alternatives. Most potential short-term adverse effects along with most long-term benefits of all alternatives. |
| **Oil and Gas** | NSO within 0.25 mile of known sensitive status plant populations would reduce risk of habitat disturbance. | NSO within 0.25 mile of known sensitive status plant populations would reduce risk of habitat disturbance. | Greatest reduction in risk of habitat disturbance with NSO within 0.5 mile of known special status plant population. | NSO of known sensitive status plant populations would limit disturbance of populations, however risk of habitat disturbance and fragmentation would be the highest. |
| ***WILDLAND FIRE MANAGEMENT*** | | | | |
| **Fire management** | Provides 7,300 acres of Category A fire management in which wildland fire is not desired which will limit fuels treatment options to mechanical treatment on those acres. | Contains no Category A fire management, providing some flexibility in fire management. | Most restrictive fire management alternative with most acres (41,000) of Category A fire management which will limit fuels treatment options to mechanical only treatment on those acres. | Allows greatest flexibility in fire management with no Category A fire management and highest Category D acres. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***WILDLAND FIRE MANAGEMENT – continued*** | | | | |
| **Fire suppression strategies** | Allows for some flexibility to manage fires but a large percentage could be controlled while still small in size. | Same as Alt. A, but more flexibility to manage fires since no Category A designations. | Greatest potential to reduce loss of life and property and protect resources because fire suppression high priority. | Same as Alt. A. |
| **Hazardous fuel treatments** | Reduces fuels on second least acres (14,430 per decade). Lower fuel levels would result in a reduced potential for high-severity fires. | Reduces fuels on second most acres per decade of all alternatives, and would reduce fire intensity and behavior, improve fire fighter safety, and move towards historic FRCC levels more than Alts. A and C. | Reduces fuels on least acres of all alternatives, which would do the least to reduce fire intensity and behavior, improve wildland fire fighter safety, and change FRCC. | Reduces fuels on the most acres of all alternatives and would do the most to reduce fire intensity and behavior, improve wildland fire fighter safety, and move toward historic FRCC levels. |
| **Travel management** | Provides greatest access for fire suppression and fuel treatments and most opportunities for human caused wildland fire. | Provides second lowest level of access for fire suppression and fuel reduction treatments, and fewer opportunities for human-caused fire ignitions. | Provides the least access for fire suppression and fuel treatments and fewest opportunities for human-caused wildland fire. | Provides second highest level of access for fire suppression and fuel reduction treatments, and second highest opportunities for human-caused fire ignitions. |
| **Recreation Opportunity Spectrum (ROS)** | Determined on case by case basis. Provides for most flexibility between alternatives. | Could limit the flexibility for designing and planning fuels projects and implementing fire suppression on 36,800 acres. | Could limit the flexibility for designing and planning fuels projects and implementing fire suppression on 63,700 acres. | Could limit the flexibility for designing and planning fuels projects and implementing fire suppression on 30,000 acres. |
| **Visual Resource Management** | Second fewest acres designated in VRM Class I and II. This would provide for more flexibility for designing, planning, and implementation of fuels projects. | 80,400 acres designated in VRM Class I and II. This could limit the effectiveness and flexibility for designing, planning, and implementation fuels projects on those acres. | The most VRM Class I and II lands (99,100 acres) of any alternative, which may affect the extent of some fire management actions and fuel treatments more than under any other alternative. | The least VRM Class I and II lands (38,100 acres) of any alternative, which may affect the extent of some fire management actions and fuel treatments. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| **Wildlife (Seasonal Timing Restrictions)** | There would be no seasonal timing restrictions for prescribed fire or mechanical treatments in this alternative | Restrictions for prescribed fire in this alternative. This may cause delays, higher cost, and possible less effectiveness in reducing fire intensity and behavior, improve wildland fire fighter safety, and change FRCC. | Restriction on prescribed fire and mechanical treatments. This may limit the opportunities and effectiveness of to reduce fire intensity and behavior, improve wildland fire fighter safety, and change FRCC especially in areas of wildland urban interface. | Same as Alt. A. |
| ***CULTURAL AND PALEONTOLOGICAL RESOURCES*** | | | | |
| **Recreation sites/ special designations** | Possible adverse effects due to development of recreation sites. | Increased protection of tradition-al cultural properties over Alts. A and D due to acreage managed as ACECs and increased restrictions on surface disturbing activity. | Most protective of cultural properties due to largest acreage managed as ACECs. | Increased protection of traditional cultural properties over Alt. A due to increase in acreage managed as ACECs. |
| **Oil and gas leasing** | Large number of cultural sites would be vulnerable to adverse effects due to standard lease terms and controlled surface use stipulations. | Fewer cultural sites would be vulnerable to adverse effects due to standard lease terms and controlled use stipulations as well as NSO for traditional cultural properties compared to Alt. A. | Most protective of cultural sites because it has the lowest number of acres open for fluid mineral leasing. | Same as Alt. B. |
| **Forest treatments** | Risk of impacting cultural and paleontological resources due to ground disturbance from vegetation treatments would not change. | Alt. B would place more cultural and paleontological resources at risk due to an increase in forest treatments over Alt. A. | Fewer cultural and paleontological resources would be at risk than in the other alternatives due to less ground disturbance from vegetation treatments. | Highest proposed forest treatment acres would put more cultural and paleontological resources at risk than under any other alternative. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***CULTURAL AND PALEONTOLOGICAL RESOURCES – continued*** | | | | |
| **Visual Resource Management** | Lowering the number of acres managed as Class II in this alternative may have an adverse impact on traditional cultural properties, which often incorporate the quality of the viewshed for traditional values. | Increasing Class II acreages would improve the visual quality of traditional cultural properties in those viewsheds. | Most beneficial to traditional cultural properties by providing greatest acres managed under Class II and III and allowing fewest viewshed intrusions. | Same as Alt. B. |
| **Soil protection** | Alt. A would put the most cultural and paleontological resources at risk of loss from erosion due to less protection of the soil resource. | Alt. B would prevent soil erosion more than Alts. A or D and would therefore protect more cultural and paleontological resources. | Alt. C would be most protective of soil resources and would therefore, protect more cultural and paleontological resources. | Same as Alt. A. |
| **OHV and Travel Management** | This alternative has the most miles of open roads and the fewest miles of closed roads. Therefore, this alternative presents the highest risk of vandalism and erosional damage to cultural resources and paleontological localities. | Since this alternative has more closed roads, fewer cultural resources are at risk than under Alts A and D. Some resources may be at risk from road closures and decommissioning requiring mechanical treatment. | Alt C. would protect the most cultural resources and paleontological localities from vandalism because of the large number of closed roads, but it would also present some risk to other resources when closed and decommissioned roads require physical treatment prior to closing. | Alt. D would put more sites at risk than Alts. B and C due to the provision for more open roads. Alt. D would have less risk than Alt. A. |
| ***VISUAL RESOURCES*** | | | | |
| **Vegetation treatments** | Second lowest potential for short-term adverse impacts to visual qualities due to vegetation treatments in grasslands and shrublands (5,250 acres/ decade). Second lowest potential for long-term benefits due to enhanced vegetation conditions and reduced wildfire risks. | Increased treatment of grassland and shrubland habitat (second highest – up to 15,450 acres/ decade) could create additional short to mid-term impacts to visual quality due to changes in color and texture but would promote long-term visual benefits due to reduced potential for large-scale wildland fires. | Least grassland and shrubland treatments of the action alternatives. Effects would be similar to Alt. B but to a lesser extent, given that only up to 2,750 acres of treatment would be targeted/ decade. | Greatest potential impacts/ benefits to visual resources, since this alternative proposes the most vegetative treatments (up to 25,850 acres/ decade). |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| **Forest products removal** | Second lowest potential impacts to visual resources from harvesting activities in dry forests (5,100 acres/decade) and cool, moist forests (2,400 acres/decade). Highest potential impacts from timber salvage given least restrictions imposed. | Second highest potential impacts from dry (up to 14,750 acres/ decade) and moist (up to 3,750 acres/decade) forest harvests. Second highest potential for impacts from salvage related activities. | Lowest potential impacts of all alternatives given that potential forest treatment acres within forest types (dry-up to 4,800 acres/decade and moist- up to 550 acres/decade) would be the lowest and restrictions governing salvage cutting are the most restrictive. | Highest potential impacts from dry (up to 18,200 acres/decade) and cool, moist (5,050 acres/decade) forest harvests. Second lowest potential for impacts to visuals next to Alt. A, from salvage harvests. |
| **Travel management** | Due to highest number of open motorized roads (629 miles), effects on visual quality would be highest of all alternatives. | Scenic qualities would be enhanced and sensitive viewpoints reduced by reducing designated routes more than Alts. A and D, to 417 miles. | Lowest impacts to visual resources of all alternatives given that motorized uses and open roads would be limited to 372 miles. | Second highest impacts to visual resources as open roads would total about 479 miles. |
| **ROS** | Does not establish ROS and would therefore be least protective of visual resources of all alternatives. | More protection for visual resources than Alts. A and D due to designation of one third of BFO lands (108,600 acres) as semi-primitive non-motorized and semi-primitive motorized. | Greatest protection for visual resources of all alternatives since highest acreages managed as semi-primitive non-motorized and motorized (130,600 acres). | Second fewest acres designated under the more protective ROS settings (67,600 acres) and therefore visual resources would be subject to more potential impacts than under Alts. B and C. |
| **Mineral and energy exploration** | Potential impacts from oil and gas leasing would be higher than under Alt. D because of CSU stipulation that would only be Standard Lease Terms under Alt. D. Short and mid-term impacts from salable minerals would continue until vegetation and excavation are reclaimed. | Potential impacts from oil and gas leasing would be similar as Alt. A because of same CSU stipulation. Reduced impacts compared to Alt. A due to proposed withdrawal of 198 acres from mineral entry. | Least impacting alternative to visual resources since oil and gas leasing would be excluded from 89 percent of DA. Benefits from proposed mineral withdrawals would be the same as under Alt. B. | Impacts from oil and gas leasing would be the greatest compared to all other alternatives due to SLTs instead of CSU stipulation. Effects of other mineral activity similar to Alt. A. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***VISUAL RESOURCES – continued*** | | | | |
| **Special designations** | More protective of visual resources than Alt. D since six WSAs managed as VRM Class I and four suitable WSR segments as VRM Class II. | More special designation acres classified as VRM Class II than Alt. A due to four ACEC designations and two suitable WSR segments. | Most visual protection of all alternatives since all four eligible WSR segments found suitable and afforded greater long-term protection, and because more areas and acres would be designated as ACECs than under any other alternative. | Greatest potential visual impacts of all alternatives because no WSR segments would be protected and fewer acres would be designated as ACECs. |
| ***FORESTRY AND WOODLAND PRODUCTS*** | | | | |
| **PSQ** | Alt A would provide amounts of forest products up to current levels under existing planning. | Alt B. would provide similar amounts of forest products as provided under Alt. A, utilizing treatment approaches that treat group of stands or forested areas taken together holistically rather than an individual stand by stand perspective that strives to provide the most products over time. | Alt. C would provide the least forest products of all alternatives | Alt. D would provide more forest products than all alternatives, by more aggressively treating more acres with fewer intermediate treatments. |
| **Recreation Opportunity Spectrum** | No ROS Classifications and no overall adjustment in forest product offerings. | Approximately 18,554 acres of forest and woodlands designated ROS Semi-primitive non-motorized and 26,283 acres designated as Semi-primitive motorized, potentially reducing PSQ on 41 percent of forested areas available for product removal. Seventeen percent potential reduction in the forested area available for small public demand sales such as Christmas trees and firewood | Most restrictive of all alternatives. Approximately 23,895 acres of forest and woodlands designated ROS Semi-primitive non-motorized and 31,583 acres designated as Semi-primitive motorized, potentially reducing PSQ on 50 percent of forested areas available for product removal. Twenty nine percent potential reduction in the forested area available for small public demand sales such | Approximately 18,029 acres of forest and woodlands designated ROS Semi-primitive non-motorized and 13,823 acres designated as Semi-primitive motorized, potentially reducing PSQ on 29 percent of forested areas available for product removal. Sixteen percent potential reduction in the forested area available for small public demand sales such as Christmas trees and firewood from |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| | | from area available under Alternative A. | as Christmas trees and firewood from area available under Alternative A. | area available under Alternative A. |
| **Visual Resource Management** | No VRM Classifications and no overall adjustment in forest product offerings, but adjustments could occur on a case by case basis depending on analysis of impacts. | Approximately 16,902 acres of forest and woodlands designated VRM Class II potentially reducing PSQ on 15 percent of forested areas available for product removal under Alternative A. | Most restrictive of all alternatives. Approximately 27,259 acres of forest and woodlands designated VRM Class II potentially reducing PSQ on 25 percent of forested areas available for product removal under Alternative A. | Same as Alt. A. |
| **Riparian management** | Highest forest product offerings and support of PSQ in riparian and nearby upland areas, as restrictions would be limited only by state regulations derived from Montana SMZ laws. | Limited product offerings as riparian management objectives would dictate treatment type and level of forest change needed to meet objectives in the RMZs, which are defined as 160 feet on either side of fish bearing streams (39 acres per mile of stream), 80 feet on either side of non-fish bearing streams (19 acres per mile of stream), and 50 feet on either side of intermittent streams (12 acres per mile of stream). Forest management and product removal efficiency would be reduced as access and heavy equipment use would be restricted in these areas, based on impacts to resources in the RMZ. | Alternative C provides the smallest amount of product offerings and support of PSQ from RMZs, which are defined as 300 feet on either side of fish bearing streams (73 acres per mile of stream), 150 feet on either side of non-fish bearing streams (36 acres per mile of stream), and 50 feet on either side of intermittent streams (12 acres per mile of stream). No commercial forest products would be removed from these areas. | Same as Alt. A |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***FORESTRY AND WOODLAND PRODUCTS – continued*** | | | | |
| **Small forest product sales** | Alts. A and B are similarly effective at meeting public demand for small sale products, with Alt. B having slightly higher amounts of products made available due to a more proactive landscape approach and anticipated use of stewardship tools. Permits for forest products are less than estimated under Alts. B and D and much more than Alt. C. | Second most effective at meeting public demand for small sale products. Alt. B is less restrictive with more permits than Alts. A and C, but less than Alt. D. | Least effective at meeting public demand for small sale products. Lowest number of permits for forest products removal of all alternatives. Firewood would be least available to the public under this alternative, using permits to cut green trees or dead and down wood in designated areas. | Highest level of permits for forest products. Most effective at meeting public demand for small sale products. |
| **Biomass** | Opportunities for biomass would be 55 CCF/decade, the least of all alternatives. | Biomass production would be approximately 77 CCF/decade. | Same as Alternative A. | Biomass production would be greater than under all other alternatives with 105 CCF/decade. |
| **Timber salvage** | Alt. A provides greatest salvage opportunities. Loss of forest products from fire would create greater salvage opportunities than under all other alternatives. | Limited salvage compared to Alt. A. Salvage from fire mortality would have less product removal than Alternatives A and D. | Limited salvage opportunities compared to other alternatives as Alternative C includes most restrictive prescriptions. Projects are likely to be smaller and occur less often. | Alt. D limits salvage compared to Alt. A, but projects would be larger and occur more often than Alternatives B and C. |
| **Travel management** | Provides greatest access for small sales permits and economic efficiency for forest management and timber removal activities, with approximately 416 open road miles available in the five site-specific travel planning areas. Most miles of open and seasonally limited roads, approx- | Road closures could reduce economic efficiency of some projects, reduce public access for small sales permits. Approximately 84 percent of the roads available under Alt. A for timber removal in the five site-specific travel planning areas would be available under Alt. B , 45 percent of which would be | Reduces economic efficiency of projects compared to Alternative B, as no construction of new permanent roads would be allowed. Public access for small sales would be reduced more than under other alternatives due to fewer open roads. Approximately 87 percent of the roads available for timber | Economic efficiency similar to Alternative B, but public access for small sales permits and ability to meet public demand would be greater than Alts. B and C. Approximately 87 percent of the roads available for timber removal in the five site-specific TPAs under Alternative A would still be available, |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| | imately 379 miles would support small product sales. | available for public use in the removal small sale products such as Christmas trees and firewood. | removal under Alt. A in the five site-specific travel planning areas would still be available under Alt. C, 33 percent of which would be available for public use in the removal small sale products such as Christmas trees and firewood. | 61 percent of which would be available for public use in the removal small sale products such as Christmas trees and firewood. |
| ***LIVESTOCK GRAZING*** | | | | |
| | Alts. A and D provide greatest opportunity for livestock grazing with 278,000 acres available. | 270,000 acres available for grazing would be more than Alt. C, but less than Alts. A and D. | Fewest acres (262,000) available for livestock grazing. | Same as Alt. A. |
| **Vegetation treatments** | Forage quality and quantity improvement on grasslands and shrublands would slowly decline because of net increase in conifer encroachment (1,161 acres per decade). Short-term effects would occur where deferment and temporary removal of livestock required after vegetation treatments. | Forage quality and quantity improvement on grasslands and shrublands would improve because of net decrease in conifer encroachment (up to 9,039 acres per decade). Short-term impacts to grazing from the one-year resting period before vegetation treatment and the two-year resting period after treatment (with case by case flexibility). | Forage quality and quantity improvement on grasslands and shrublands would decline at fastest rate because of net increase in conifer encroachment (3,661 acres per decade). Impacts to livestock grazing are mandatory rest one year prior to treatment and rest two growing seasons following treatments. | Greatest improvement in long-term livestock forage quality and quantity due to most acres undergoing vegetation treatment resulting in largest net decrease of conifer encroachment— up to 19,489 acres per decade. Short-term impacts to grazing from the one-year resting period before vegetation treatment and the one-year resting period after treatment. |
| **Noxious weed management** | Under a worst case scenario of weed treatment accomplishments in under action alternatives, Alt. A would have the least amount of noxious weed spread—to 43,000 acres over a ten year period and would have the least impact to livestock forage base. | Forage base for livestock grazing reduced under worst case weed treatment scenario because noxious weed spread would reach up to 48,000 acres in ten years. | Worst case weed treatment scenario could lead to noxious weed spread on up to 51,000 acres over ten years would reduce the forage base the most of all alternatives. | Worst case weed treatment scenario could lead to noxious weed spread on up to 47,000 acres over ten years, consequently more livestock forage would be maintained than under alternatives B and C, but less than A. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***LIVESTOCK GRAZING – continued*** | | | | |
| **Travel management** | Greatest potential conflicts (gates left open, livestock disturbance, etc.) with grazing program due to the most roads open and open w/restrictions – 629 miles DA-wide. | Compared to Alt. A, conflicts between grazing and wheeled vehicles would be reduced due to road closures leaving 417 miles of roads open and open w/restrictions DA-wide. | Alt. C would provide the least miles of road open and open w/restrictions – 372 miles DA-wide, resulting in fewest conflicts with grazing of all alternatives. | Conflicts with grazing more than Alts. B and C, but less than Alt. A, as 479 miles of road would be open and open w/restrictions DA-wide. |
| ***ENERGY AND MINERALS*** | | | | |
| **Riparian management zones** | No change. | Potential additional expenditures and longer permitting timeframe for the mineral developer due to requirements to avoid roads and facilities inside RMZs when possible. Placer mines could be more difficult and time consuming to permit. | Additional restrictions could impact the ability to proceed with the project, should access to water or the stream bed be a critical part of the proposed operation. Operating/rehabilitation requirements could make some placer mining operations uneconomic. | Avoidance, mitigations, and BMPs associated with roads in riparian areas would make effects of Alt. D similar to Alts. A and B. |
| ***Leasable Minerals (Oil and Gas)*** | | | | |
| **Stipulations** | Major constraints such as NSO stipulations may decrease some lease values, increase operating costs, and to a lesser extent require relocation of well sites and modification of field development. Leases issued with moderate constraints such as CSU or timing stipulations may result in similar impacts to a lesser degree and delays in operations and uncertainty.<br>Under Alt. A, federal mineral estate lands would be available subject to the following levels | The impact of individual constraints would be similar to that for Alt. A; however, the level and nature and number of constraints varies from that alternative for this alternative.<br>Under Alt. B federal mineral estate lands would be available, subject to the following levels of constraints:<br>Major Constraints – 42.9%<br>Moderate Constraints – 49.9%<br>Standard Terms – 2.8%<br>Approximately 4.4% would be unavailable for lease. | The impact of individual constraints would be similar to that for Alternative A; however, the level, and nature and number of constraints varies from that alternative for this alternative.<br>Under Alt. C federal mineral estate lands would be available, subject to the following levels of constraints:<br>Major Constraints – 3.7%<br>Moderate Constraints – 4.7%<br>Standard Terms – 2.6%<br>Approximately 89.0% would be unavailable for lease. | The impact of individual constraints would be similar to that for Alternative A; however, the level, and nature and number of constraints varies from that alternative for this alternative.<br>Under Alt. D federal mineral estate lands would be available subject to the following levels of constraints:<br>Major Constraints – 14.3%<br>Moderate Constraints – 71.8%<br>Standard Terms – 8.3%<br>Approximately 5.6% would be unavailable for lease. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| | of constraints:<br>Major Constraints – 38.6%<br>Moderate Constraints – 48.1%<br>Standard Terms – 4.9%<br>Approximately 8.4% would be unavailable for lease.<br>Alts. A and B would be similar in their level of constraints. | Alternatives A and B would be similar in their level of constraints. | Alternative C would be the most restrictive of the four alternatives. | Alternative D would be the least restrictive of all alternatives. |
| ***Locatable Minerals*** | | | | |
| **High mineral potential – 118,560 total acres** | 103,541 open acres<br>11,344 restricted acres<br>3,675 closed acres | 77,390 open acres<br>37,495 restricted acres<br>3,675 closed acres | 71,359 open acres<br>43,455 restricted acres<br>3,746 closed acres | 103,541 open acres<br>11,342 restricted acres<br>3,675 closed acres |
| **Medium mineral potential – 34,952 total acres** | 24,505 open acres<br>6,495 restricted acres<br>3,952 closed acres | 21,414 open acres<br>9,586 restricted acres<br>3,952 closed acres | 17,473 open acres<br>13,527 restricted acres<br>3,952 closed acres | 24,505 open acres<br>6,495 restricted acres<br>3,952 closed acres |
| **Low to None Mineral Potential – 151,466 total acres** | 111,092 open acres<br>30,479 restricted acres<br>9,894 closed acres | 99,899 open acres<br>41,647 restricted acres<br>9,919 closed acres | 87,196 open acres<br>54,248 restricted acres<br>10,022 closed acres | 111,804 open acres<br>29,758 open acres<br>9,894 closed acres |
| **Totals** | 239,138 open acres<br>48,319 restricted acres<br>17,522 closed acres | 198,704 open acres<br>88,728 restricted acres<br>17,547 closed acres | 176,028 open acres<br>111,230 restricted acres<br>17,720 closed acres | 239,850 open acres<br>47,607 restricted acres<br>17,522 closed acres |
| Notes: Acreage analyzed excludes approximately 2,300 acres not covered by the MBMG Mineral Potential reviews and 347,000 acres of federal subsurface minerals.<br>Restricted areas include WSAs, ACECs, Wild and Scenic Rivers, and Threatened and Endangered species habitat (grizzly bear and bull trout)<br>Closed areas include Withdrawals and lands acquired with LWCF funds.<br>Open areas are all other areas<br>Travel Plan road designations not included in analysis | | | | |
| **Lands and realty** | Increased or decreased opportunities to explore/develop areas could result from acquisition or disposal of lands with mineral value. | Same as Alt. A. Additionally, proposed withdrawal of 198 acres in recreation sites would decrease available acres in the BFO for mineral location. | Proposed withdrawal of 378 acres in recreation sites and Muskrat Creek drainage would decrease available acres in the BFO for mineral location. | Same as Alt. A. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***ENERGY AND MINERALS – Locatable Minerals – continued*** | | | | |
| **Special designations** | Performance standards required for protection of relevant and important values of ACECs, and Notice-level review that would require NEPA analysis would cause time delays for permitting. | Same as Alt. A. | Same as Alt. A. | Same as Alt. A. |
| **Travel management** | Alternative A is less restrictive in providing access to mineralized areas than any other alternative. | Alternative B is potentially more restrictive on access to mineralized areas than Alternatives A and D, and less restrictive than Alternative C. Operators would need to obtain travel variances to conduct exploration on more closed roads than under Alternatives A and D. | Alternative C is potentially the most restrictive alternative for access to mineralized areas. Operators would need more travel variances to conduct exploration on closed roads than under any alternative. | Alternative D is the least potentially restrictive of the action alternatives, but more restrictive than Alternative A for access to mineralized areas. |
| **Abandoned mine lands** | Reclamation of AML would reduce risks to the public from potential environmental or safety hazards. However these activities will also result in the removal or obscuring of information used by exploration companies to sample and map mineral deposits. | Same as Alt. A. | Same as Alt. A. | Same as Alt. A. |
| ***Salable Minerals*** | | | | |
| | Mine development for salable minerals would usually be located near municipalities or small rural communities to maximize convenience to the public. | Additional expenditures and longer approval time could result from management direction to avoid or minimize effects on riparian zones from structures, support facilities, and roads. | Same effects as Alt. A, but since development of new pits by private citizens would be eliminated; mineral materials would cost more through commercial sources due to higher transportation costs. | Same as Alt. A. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***RECREATION*** | | | | |
| **Vegetative treatments** | Second lowest potential for quality recreation experiences dependant on natural settings due to disturbances associated with vegetation treatments. | Second highest potential for impacts on dispersed recreation uses due to higher disturbances associated with vegetation treatments. | Lowest potential for impacts on dispersed recreation uses due to disturbances associated with vegetation treatments since least acres treated. | Highest potential for impacts on dispersed recreation uses from disturbances associated with vegetation treatments since most acres treated. |
| **Riparian restoration** | Dispersed recreation most impacted and developed site management least impacted since riparian protection less restrictive than Alts. B and C. | Dispersed recreation in riparian areas improved and developed site management impacted over Alts. A and C due to increased size of RMZs. | Most enhanced dispersed recreation experiences and impacts to developed site management due to greater RMZ protective measures. | Same as Alt. A. |
| **Noxious weeds** | Recreationists seeking a natural setting with fewer weeds would benefit most since this alternative would result in the lowest projected weed infestation (43,000 acres by 2015 under worst case weed treatment scenario). | More beneficial to recreationists desiring natural setting experiences without weeds (48,000 acres of weed infestation by 2015 under worst case weed treatment scenario) than Alt. C, but less than Alts. A and D. | Recreationists seeking a natural setting without weeds would benefit least under this alternative given the projected weed infestation of 51,000 acres by 2015 under the worst case weed treatment scenario. | More beneficial to recreationists desiring natural setting experiences without weeds (47,000 acres by 2015 under worst case weed treatment scenario) than Alts. B and C, but less beneficial than Alt. A. |
| **Road densities** | Least impact to motorized users and potentially the greatest impact to non-motorized users since Alt. A features the most open roads. | More impacts to motorized users than Alts. A and D due to projected reduction of open roads in big game winter range. Recreationists seeking non-motorized experiences would be benefited the second most next to Alternative C. | Motorized users most impacted and non-motorized users most benefited due to an added restriction of no net increase in permanent roads where target road densities are exceeded in big game winter range areas. | Impacts to motorized riders less than Alts B and D due to higher road densities and more open roads. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***ENERGY AND MINERALS – Locatable Minerals – continued*** | | | | |
| **User opportunities** | Most opportunities for motorized users, those seeking organized motorized events, and snowmobile riders due to fewest restrictions. Fewest non-motorized opportunities. Most opportunities for boat-in camping. | More opportunities than Alts. A and D for non-motorized users due to fewer open roads. Fewer opportunities for motorized use, organized motorized events and snowmobile riding. Reduction in dispersed recreation sites by limiting boat-in camping opportunities. | Greatest opportunities for non-motorized users due to fewest open roads. Least motorized and snowmobile opportunities. Opportunities for organized motorized events eliminated. Dispersed camping at Holter and Hauser Lakes eliminated by closing entire shoreline to boat-in camping except at developed sites. | Provides most opportunities for motorized users, next to Alt. A due to acres available for motorized events, mileage of open roads and fewest opportunities for non-motorized users. Boat-in camping opportunities same as Alt. A. |
| **SRMAs** | Recreation management emphasis prioritized within SRMAs ensuring quality recreation opportunities and experiences are provided. | Increased recreation management over Alts. A and D through addition of four more SRMA designations. | Same as Alt. B but most SRMAs within ROS Semi-Primitive, Non-Motorized setting. | Same as Alt. A. |
| **Outfitter fees, permits and camping limits** | Value based revenues from outfitters using developed BLM river/lake access sites not realized. Greatest opportunities offered for commercial and public camping. | Fair value revenues realized from outfitters using developed BLM river/lake access sites. Commercial and public camping opportunities limited to a greater degree than Alts. A and D. | Fair value revenues maximized from outfitters using developed BLM river/lake access sites. Commercial and public camping opportunities limited the most. | Fair value revenues from outfitters using developed BLM river/lake access sites realized in a more comprehensive and customer friendly manner. Commercial and public camping opportunities same as Alt. A. |
| **User conflicts and violations** | Potential for social conflicts and violations within the Scratchgravel Hills would be the highest since no management changes would occur. | Potential for social conflicts and violations within the Scratchgravel Hills would be reduced the second most given the proposed yearlong restrictions on motorized uses. | Potential for social conflicts and violations within the Scratchgravel Hills would be reduced the most given the additional restrictions proposed on motorized uses. | Potential for social conflicts and violations within the Scratchgravel Hills would be similar to Alt. A. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| **Recreation Opportunity Spectrum** | Possible negative impacts to recreation use since no ROS classifications. Management would be reactive rather than proactive. | Balanced approach for managing recreation settings, opportunities, and experiences compared to Alts. C and D. | Maximum acreage designated as ROS Semi-Primitive Non-Motorized creating greatest non-motorized and least motorized opportunities. | Highest acreage of designated ROS settings that allow for motorized uses, developed infrastructure and less natural settings. Impacts similar to Alt. A. |
| **Special designations** | Least protective of special designation values as only the Sleeping Giant ACEC (11,679 acres) would continue to be designated. None of the four eligible WSR segments would be recommended as suitable although ORVs would be protected. | Second greatest protection of the relevant and important values and associated recreation opportunities as four ACECs would be designated totaling about 70,644 acres and outstandingly remarkable values as two WSR segments totaling 5.7 miles would be protected and two segments totaling 6.3 miles dropped. | Most protective of special designation values and associated recreation opportunities as five ACECs would be designated totaling about 87,893 acres and all four WSR segments totaling 12 miles would be recommended as suitable. | Second least protective of special designation values and associated recreation opportunities as three ACECs would be designated totaling about 23,695 acres and no WSR segments would be protected. |
| **Visual Resource Management** | Protects second lowest acreage managed as Class I and II VRM | Second highest acreage under Classes I and II allowing management for higher natural character retention. | Highest acreage under Classes I and II allowing greatest level of management for natural character retention. | Least protective of recreational opportunities and experiences dependent on natural settings since lowest acreage managed as VRM Classes I and II. |
| **Mineral and energy management** | High probability that recreation settings and visitor experiences would be impacted by oil and gas leasing since second lowest level of stipulations. | Better protection of recreation facility investments and site opportunities than Alts. A and D since eight sites withdrawn from mineral entry.<br>Lower probability of impacts to recreation settings and visitor experience than Alts. A and D due to stipulations on solid and fluid mineral activities. | Impacts from withdrawal of eight sites same as Alt. B. Lowest probability for impacting recreation settings and visitor experience due to most restrictive stipulations on solid and fluid mineral activities. | Highest probability for impacting recreation settings and visitor experiences due to lowest amount of restrictive stipulations on solid and fluid mineral activities. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***TRAVEL MANAGEMENT AND ACCESS*** | | | | |
| ***Travel Management – Field Office-wide*** | | | | |
| **Field Office-wide area designations for travel** | Alt. A area designations for wheeled vehicles would be:<br>Open- 4,367 acres<br>Closed-31,500 acres<br>Limited-271,442 acres. | Alt. B area designations for wheeled vehicles would be:<br>Open- 283 acres<br>Closed-31,500 acres<br>Limited-275,526 acres. | Alt. C area designations for wheeled vehicles would be:<br>Same as Alt. B. | Alt. D area designations for wheeled vehicles would be:<br>Same as Alt. B. |
| **Field Office-wide area designations for travel** | Alt. A area designations for snowmobiles would be:<br>Open- 143,206 acres<br>Closed- 27,065 acres<br>Limited- 137,038 acres. | Alt. B area designations for snowmobiles would be:<br>Open- 112,682 acres<br>Closed- 54,706 acres<br>Limited- 139,921 acres. | Alt. C area designations for snowmobiles would be:<br>Open- 26,148 acres<br>Closed- 65,270 acres<br>Limited- 215,891 acres. | Alt. D area designations for snowmobiles would be:<br>Open- 139,138 acres<br>Closed- 31,282 acres<br>Limited- 136,889 acres. |
| **Total miles of travel routes available** | Under Alt. A, the total mileage of travel routes available Decision Area-wide (Open, Open/Restricted, Snowmobile Only, Non-Motorized Trails, Game Retrieval Only, Motorcycles Only, ATV Only) would be approximately 684 miles. | Under Alt. B, the total mileage of travel routes available (Open, Open/Restricted, Snowmobile Only, Non-Motorized Trails, Game Retrieval Only, Motorcycles Only, ATV Only) would be approximately 485 miles. | Under Alt. C, the total mileage of travel routes available (Open, Open/Restricted, Snowmobile Only, Non-Motorized Trails, Game Retrieval Only, Motorcycles Only, ATV Only) would be approximately 430 miles. | Under Alt. D, the total mileage of travel routes available (Open, Open/Restricted, Snowmobile Only, Non-Motorized Trails, Game Retrieval Only, Motorcycles Only, ATV Only) would be approximately 547 miles. |
| **Motorized/non-motorized opportunities** | Greatest number of motorized opportunities. | Substantially increased opportunities for non-motorized users. Motorized wheeled access restricted to routes leading up to non-motorized trailheads. | Route closures would result in net decrease of motorized routes and highest level of non-motorized opportunities compared to Alts. B and D. Same as Alt. B for competitive motorized events. | Alt. D is less restrictive and could result in more routes in the transportation system. Non-motorized opportunities would be more than under Alt. A, but less than under Alts. B and C. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***TRAVEL MANAGEMENT AND ACCESS – Travel Management – Field Office-wide - continued*** | | | | |
| **User conflicts** | User conflict greatest under Alt. A, because motorized and non-motorized users would share same routes. Conflicts with snowmobile use would increase because cross-country travel would continue. | Reduced user conflict due to dispersed recreational opportunities. | Same as Alt. B. | Same as Alt. B. |
| **Illegal activities** | Greatest under Alt. A due to more miles open to yearlong motorized access. | Illegal activities may be less under Alt. B than Alts. A and D, but may still occur more than Alt. C. | Due to increase in route closures, Alt. C would have the least amount of illegal activity. | Illegal activities may be less under Alt. D than Alts. A, but may still occur more than Alts. B and C. |
| **Road and trail safety** | More accidents/injuries expected under Alt. A due to motorized and non-motorized users on the same routes. | Less accidents/injures due to dispersed recreational opportunities. | Same as Alt. B. | Same as Alt. B. |
| **Forest management** | If needed, up to 5.5 miles of new permanent roads could be constructed per year to provide access for treatments. Opportunities for motorized users could be increased and non-motorized users could be diminished by increasing road density for forest product management where permanent roads are constructed. | Temporary road construction would also be kept to a minimum, and temporary roads would be decommissioned within one year of project completion. Degree of new road construction would be less than Alts. A and D. | Temporary road construction would also be kept to a minimum, and temporary roads would be decommissioned within one year of project completion. Impacts less than other alternatives because no new permanent roads would be constructed. | Degree of road building would be less than Alt. A but more than Alt. B. |
| **Wildlife and special status species** | Reduced short term impacts on travel and access due to fewer seasonal wildlife closures than other alternatives. | Seasonal wildlife closures would create short term impacts on travel and access. | Same as Alt. B except stricter resource protection. | More seasonal wildlife closures than under Alternative A, but less restrictive than alternatives B and C. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***TRAVEL MANAGEMENT AND ACCESS – Travel Management – Field Office-wide - continued*** | | | | |
| **Road density** | Road density would not change | Road density levels in big game winter ranges would result in fewer motorized routes and concentrated use on fewer roads. | Greater effect on transportation system than Alts. B and D due to proposed route closures. | Overall net decrease of available motorized routes but to a lesser extent than Alts B and C. |
| **User compliance/ implementation** | Information kiosks would enhance user compliance and public safety. Management costs under Alt. A would be mixed. Less personnel time would be required to monitor user compliance; however more effort would be required for initial signing efforts. | Moderate increase in travel management costs due to initial sign implementation and long-term travel plan compliance. In comparison, higher than Alts. A and D, but less than Alt. C. | Management costs would be greater than under all other alternatives due to greater efforts needed to monitor travel plan compliance. | Same as Alt. B. |
| **Public easements** | Acquiring easements would increase the overall route network and expand both motorized and non-motorized opportunities. | Same as Alt. A. | Same as Alt. A. | Same as Alt. A. |
| **Special designations** | Lowest potential impacts on future transportation routes given that only 11,679 acres would be recommended or designated as ACECs or WSRs. | Second highest acres protected as ACECs and WSRs and therefore transportation routes would be subject to greater restrictions. | Highest special designation acreage protected and therefore the most restrictions imposed on existing and future transportation systems. | Second lowest acreage protected as special designations therefore greater potential for future transportation access routes. |
| **Mineral operations** | New permanent roads for mineral development could increase public access. | Short or long-term increase in transportation system from permitting roads for mineral operations outside RMZs. | New roads would not be allowed within RMZs for mineral development. Some travel network expansion may occur with routes outside RMZs. | Same as Alt. B. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***Helena TPA*** | | | | |
| **Motorized/Non-motorized opportunities** | BLM would continue to allow recreational activities including motorized vehicle uses within the Scratchgravel Hills 24 hours/day. | The entire Scratchgravel Hills area would be closed to wheeled motorized vehicle uses yearlong with the exception of routes needed for residential access. | The entire Scratchgravel Hills area would be closed to both motorized and non-motorized recreational uses after dark (dusk to dawn) yearlong. | Same as Alternative A. |
| | No non-motorized trails designated. Motorized use would continue 24 hours a day within the Scratchgravel Hills. | Increased opportunities for non-motorized users since motorized access restricted to routes leading to existing trailheads in Scratchgravel Hills. | Alt. C would provide 15 percent more non-motorized routes than Alt. B and 85 percent fewer motorized routes than Alt. A. | Increased opportunities for motorized users because new loop routes created in Scratchgravel Hills. |
| | Area availability for wheeled, motorized use (in acres) - Open: 0, Closed: 0, Limited: 10,164 | Area availability for wheeled, motorized use (in acres) same as Alternative A. | Area availability for wheeled, motorized use (in acres) same as Alternative A. | Area availability for wheeled, motorized use (in acres) same as Alternative A |
| | Miles of wheeled motorized routes available (Open Yearlong, Seasonally Restricted): 52.2 | Miles of wheeled motorized routes available (Open Yearlong, Seasonally Restricted): 9.8 | Miles of wheeled motorized routes available (Open Yearlong, Seasonally Restricted): 7.0 | Miles of wheeled motorized routes available (Open Yearlong, Seasonally Restricted): 21.9 |
| | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 0 | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 42.5 | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 45.3 | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 30.8 |
| **Snowmobile use** | Area wide cross-country snowmobile use would continue to be allowed as well as travel on all existing routes, during the season of use (12/2-5/15), snow conditions permitting. | Same opportunities as Alt. A. | Potential long-term effects to users because cross-country snowmobile use would not be allowed. | Same as Alt. A. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***TRAVEL MANAGEMENT AND ACCESS – Helena TPA – Snowmobile Use - continued*** | | | | |
| | Area availability for snowmobile use (in acres) - Open: 10,164, Closed: 0, Limited: 0<br>Miles of motorized routes available to snowmobile travel: 52.2 | | Area Availability for snowmobile use (in acres) - Open: 0, Closed: 0, Limited: 10,164<br>Miles of motorized routes available to snowmobile travel: 7 | |
| **User conflicts** | User conflict would be greatest around the Scratchgravel Hills due to lack of opportunities to separate motorized from non-motorized uses. | Minimal conflicts. With the exception of a few routes needed for residential access, the Scratchgravel Hills are closed to motorized recreation use. | Alt. C would be most beneficial to reducing user conflict than other alternatives. | Same as Alt. B. |
| **Illegal activities** | Greatest level of illegal activities expected to occur. | Illegal activities (underage drinking, vandalism, dumping) in the Scratchgravel Hills would be substantially reduced. With the exception of a few routes needed for residential access, public access would be restricted to non-motorized trailheads. | Lowest level of illegal activity expected since use of Scratchgravel Hills would be restricted after dark. | Illegal activities would be less than Alt. A but more than Alts. B and C. |
| **Road and trail safety** | More accidents/injuries expected under Alt. A due to motorized and non-motorized users on same routes. | Less accidents/injures due to dispersed recreational opportunities. | Greater benefit than Alt. B because use of Scratchgravel Hills would also be restricted after dark. | Same as Alt. B. |
| **User compliance** | No additional effort needed. | Substantial effort required to educate public on change in use for Scratchgravel Hills. | Same as Alt. B. Increased cost could result from need to expand trailhead parking lots. | Same as Alt. B. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***East Helena TPA*** | | | | |
| **Motorized/ Non-motorized opportunities** | Alt. A would have 60 percent more motorized opportunities than Alts. B and C, and 15 percent more than Alt. D. | Non-motorized opportunities would increase in North Hills compared to Alts. A and D. Alt. B would also provide increased opportunities for disabled hunters. | Least amount of motorized access of all alternatives providing most non-motorized opportunities. | Alt. D would have 14 percent fewer motorized opportunities than Alt A and over 55 percent more than Alts. B or C. |
| | Area availability for wheeled, motorized use (in acres) – Open: 0, Closed: 0, Limited: 20,266 | Area availability for wheeled, motorized use same as Alternative A. | Area availability for wheeled, motorized use same as Alternative A. | Area availability for wheeled, motorized use same as Alternative A. |
| | Miles of wheeled motorized routes available (Open Yearlong, Seasonally Restricted): 44.3 | Miles of wheeled motorized routes available (Open Yearlong, Seasonally Restricted): 17.0 | Miles of wheeled motorized routes available (Open Yearlong, Seasonally Restricted): 12.0 | Miles of wheeled motorized routes available (Open Yearlong, Seasonally Restricted): 38 |
| | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 26.4 | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 47.1 | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 59.1 | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 32.6 |
| **Snowmobile use** | Open to cross-country snowmobile use except Ward Ranch, McMasters and Spokane Hills temporary closure areas. | Reduced cross-country snowmobile use from Alt. A, additional travel closures (includes cross country travel as well as travel on existing routes) for the area immediately west of the York Bridge ("Mount Bend"), the French Bar area, and BLM lands located adjacent to the Spokane Hills area. | Potential long-term effects to users because cross-country snowmobile use would not be allowed. | Less area open to cross-country snowmobile travel than with Alt. A, but more area open than with Alts. B and C. |
| | Area availability for snowmobile use (in acres) – Open: 15,066, Closed: 1,588, Limited: 3,612 | Area availability for snowmobile use (in acres) – Open: 6,362, Closed: 13,904, Limited: 0 | Area availability for snowmobile use (in acres) – Open: 0, Closed: 0, Limited: 20,266 | Area availability for snowmobile use (in acres) – Open: 14,461, Closed: 5,805, Limited: 0 |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***TRAVEL MANAGEMENT AND ACCESS – East Helena TPA – Snowmobile Use – continued*** | | | | |
| | Miles of motorized routes available to snowmobile travel: 44.3 | Miles of motorized routes available to snowmobile travel: 21.5 | Miles of motorized routes available to snowmobile travel: 12 | Miles of motorized routes available to snowmobile travel: 47.5 |
| **User conflicts** | Conflict expected to increase as urbanization continues. | Separate use areas and decreased road density would lessen user conflicts. | Same as Alt. B | User conflict would be similar to Alt. A. |
| **Illegal activities** | Greatest level of illegal activities expected to occur. | Route closures across 60 percent of area would reduce illegal activities. | Same as Alt. B. | Same as Alt. A. |
| **Road and trail safety** | More accidents/injuries expected under Alt. A due to motorized and non-motorized users on more of the same routes. | More separate use areas and decreased road density would increase road and trail safety. | Same as Alt. B. | Same as Alt. A. |
| **User compliance/ implementation** | No additional effort/expenditures needed. | Costs would be greater under Alternative B than Alternatives A and D, due to the development of non-motorized trail heads. | More effort/cost required than under other alternatives to educate public on change in use and to monitor compliance. | Same as Alt. A. |
| ***Lewis and Clark County NW TPA*** | | | | |
| **Motorized/Non-motorized opportunities** | Alt. A would have 47 percent more motorized routes than action alternatives. Non-motorized users would have fewer opportunities under Alt. A. | Opportunities for non-motorized users would be greater than Alts. A and D. | Alt. C would provide fewer opportunities for motorized users. Closure of routes in northwest corner of TPA would result in enhanced non-motorized opportunities. | Alt. D would provide more motorized opportunities than other action alternatives. Opportunities increased for ATV riders and hunters through yearlong ATV-only and game retrieval route. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| | Area availability for wheeled, motorized use (in acres) – Open: 0, Closed: 0, Limited: 16,997 | Area availability for wheeled, motorized use same as Alternative A. | Area availability for wheeled, motorized use same as Alternative A. | Area availability for wheeled, motorized use same as Alternative A. |
| | Miles of wheeled motorized routes available (Open Yearlong, Seasonally Restricted): 64.2. | Miles of wheeled motorized routes available (Open Yearlong, Seasonally Restricted): 28.1. | Miles of wheeled motorized routes available (Open Yearlong, Seasonally Restricted): 19.7. | Miles of wheeled motorized routes available (Open Yearlong, Seasonally Restricted): 34.1. |
| | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 5.3 | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 37.7. | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 46.7. | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 29.1. |
| **Snowmobile use** | Allows cross-country snowmobile use outside Great Divide Ski Area, greatest of all alternatives. | Reduced opportunities because northwest portion of TPA restricted to designated routes. | Potential long-term effects to users because cross-country snowmobile use would not be allowed. | Increase in snowmobile opportunities on designated routes compared to Alts. B and C. |
| | Area availability for snowmobile use (in acres) – Open: 16,112, Closed: 888, Limited: 0.<br>Miles of motorized routes available to snowmobile travel: 56.5. | Area availability for snowmobile use (in acres) – Open: 12,649, Closed: 888, Limited: 3,463.<br>Miles of motorized routes available to snowmobile travel: 50.8 (includes 1.8 miles of snowmobile only trail). | Area availability for snowmobile use (in acres) - Open: 0, Closed: 888, Limited: 16,112.<br>Miles of motorized routes available to snowmobile travel: 9.1 (includes 1.1 miles of snowmobile only trail). | Area availability for snowmobile use same as Alternative B.<br>Miles of motorized routes available to snowmobile travel: 51 (includes 2.0 miles of snowmobile only trail). |
| **User conflicts** | User conflict during winter due to snowmobile use; on Continental Divide Trail due to motorized and non-motorized use on the same trail. | User conflict reduced due to dispersed recreational opportunities. Rerouting Continental Divide Trail would enhance motorized/non-motorized conflicts. | Same as Alt. B. | Same as Alt. B. Restricted snowmobile use in northwest portion of TPA and Great Divide Ski Area would reduce winter use conflicts. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***TRAVEL MANAGEMENT AND ACCESS – continued*** | | | | |
| ***Boulder/Jefferson City TPA*** | | | | |
| **Motorized/Non-motorized opportunities** | Alt. A would have the most open routes of all alternatives. No designated non-motorized routes. Fewer recreation opportunities for non-motorized users. | Provides more opportunities for non-motorized users than Alt. A. | Fewer opportunities for motorized users since least number of open routes. Increased non-motorized opportunities since routes in southwest corner of TPA closed to motorized use. | Opportunities for motorized uses would be greater than Alts. B and C but less than Alt. A. |
| | Area availability for wheeled, motorized use (in acres) – Open: 0, Closed: 0, Limited: 14,487 | Area availability for wheeled, motorized use same as Alternative A. | Area availability for wheeled, motorized use same as Alternative A. | Area availability for wheeled, motorized use same as Alternative A. |
| **Motorized/Non-motorized opportunities** | Miles of wheeled motorized routes available (Open Year-long, Seasonally Restricted): 60.5 | Miles of wheeled motorized routes available (Open Year-long, Seasonally Restricted): 28.8 | Miles of wheeled motorized routes available (Open Year-long, Seasonally Restricted): 23.5 | Miles of wheeled motorized routes available (Open Year-long, Seasonally Restricted): 38.1 |
| | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 0 | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 31.7 | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 36.9 | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 23.3 |
| **Snowmobile use** | Alt. A would provide greatest opportunity for motorized winter use because TPA would be open to area-wide cross country use as well as on all existing routes. | Same as Alt. A. | Alt. C would provide fewest opportunities for snowmobiles since cross-country travel would not be allowed and fewer designated routes would be available. | Same as Alt. A. |
| | Area availability for snowmobile use (in acres) – Open: 14,487, Closed: 0, Limited: 0<br>Miles of motorized routes available to snowmobile travel: 60.5 | Same as Alt. A. | Area Availability for snowmobile use (in acres) – Open: 0, Closed: 0, Limited: 14,487<br>Miles of motorized routes available to snowmobile travel: 3.0 | Same as Alt. A. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| **User conflicts** | Greatest potential for user conflict, due to lack of separate use areas and high level of motorized routes. | Conflicts between non motorized and motorized users would be less during the spring/summer/ fall use season but continue or increase during the winter use season. | Fewer user conflicts than other alternatives due to dispersed recreational opportunities. | Same as Alt. A. |
| ***Upper Big Hole River TPA*** | | | | |
| **Motorized/Non-motorized opportunities** | Alt. A would have 38 percent more motorized routes than any other alternative. Alt. A would have fewest non-motorized opportunities. | Reduction by half of motorized opportunities due to seasonal restrictions or road closures. Non-motorized opportunities would be enhanced compared to Alt. A. | Fewest opportunities for motorized users due to least number of open routes. Non-motorized opportunities would be greatest. | Fewer opportunities for motorized use than Alt. A, but more than Alts. B and C. |
| | Area availability for wheeled, motorized use (in acres) – Open: 0, Closed: 0, Limited: 63,249 | Area availability for wheeled, motorized use same as Alt. A. | Area availability for wheeled, motorized use same as Alt. A. | Area availability for wheeled, motorized use same as Alt. A. |
| | Miles of wheeled motorized routes available (Open Year-long, Seasonally Restricted): 158.6 | Miles of wheeled motorized routes available (Open Year-long, Seasonally Restricted): 84.8 | Miles of wheeled motorized routes available (Open Year-long, Seasonally Restricted): 60 | Miles of wheeled motorized routes available (Open Year-long, Seasonally Restricted): 97.4 |
| | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 11.0 | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 76.9 | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 106.9 | Miles of non-motorized trails available (includes existing trails, as well as closed and decommissioned roads): 62.9 |
| **Snowmobile use** | Provides greatest opportunities for snowmobile use since area-wide cross-country travel and use on existing routes generally allowed. | Fewer opportunities than Alternative A. Additional areas would be closed to cross-country travel, other areas restricted to designated routes during the season of use (12/2-5/15). | No cross-country travel allowed; travel restricted to designated routes only during the season of use (12/2-5/15). | Same as Alternative A. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***TRAVEL MANAGEMENT AND ACCESS – Upper Big Hole River TPA – Snowmobile Use – continued*** | | | | |
| | Area availability for snowmobile use (acres) – Open: 31,600, Closed: 31,607, Limited: 0 | Area availability for snowmobile use (acres) – Open: 13,243, Closed: 46,932, Limited: 3,032 | Area Availability for snowmobile use (acres) – Open: 0, Closed: 31,607, Limited: 31,600 | Area Availability for snowmobile use (acres) – Open: 31,600, Closed: 31,607, Limited: 0 |
| | Miles of motorized routes available to snowmobile travel: 90.2 | Miles of motorized routes available to snowmobile travel: 60.6 (Includes 2.5 miles of snowmobile use only trail). | Miles of motorized routes available to snowmobile travel: 16.4 (Includes 2.4 miles of snowmobile use only trail). | Miles of motorized routes available to snowmobile travel: 92.7 (includes 2.5 miles of snowmobile use only trail). |
| **User conflicts** | Greatest user conflict due to least number of non-motorized trails available for recreation. | User conflicts would be reduced from Alt. A due to greater separation of motorized/non-motorized uses. | Least amount of user conflicts due to greatest number of non-motorized routes for dispersed use. | Same as Alt. B. |
| **Road and trail safety** | Greatest risk of road/trail accidents/injuries due to less separation of motorized/non-motorized uses and year-round river ford at Sawlog Gulch. | Improved public safety compared to Alt. A associated with greater separation of motorized/non-motorized uses and restricting vehicular crossing of Big Hole River from 12/2 – 7/15. | Most enhanced public safety due to greatest separation of motorized/non-motorized uses and elimination of river ford at Sawlog Gulch. | Less risk to public safety than under Alt. A but more than under Alts. B and C. Seasonal restriction on Sawlog Gulch to avoid fording river during high water. |
| ***TRANSPORTATION FACILITIES*** | | | | |
| ***Field Office-Wide*** | | | | |
| **Road maintenance, monitoring and compliance, and weed control** | Highest transportation facility costs than action alternatives due to more motorized routes. | Transportation facility costs would be less than Alts. A and D, and similar to Alt. C. Lower facility costs due to overall reduction in available routes despite increased design standards for stream crossings (culverts) and proposed barbed wire gate replacement. | Transportation facility costs would be less than Alts. A and D, and similar to Alt B. Lower facility costs due to overall reduction in available routes despite increased design standards for stream crossings (to withstand 100-year flood events) and as needed barbed wire gate replacement. | Transportation facility costs would be greater than Alts. B and D, but less than Alt. A. Lower facility costs due to overall reduction in routes despite increased design standards for stream crossings, complete barbed wire gate replacement, and new construction to provide additional loop routes. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***Helena TPA*** | | | | |
| **Road signing, maintenance, monitoring, and compliance** | Short-term lower costs for signage and compliance monitoring since fewer route restrictions. | Short-term increase in costs for trailhead maintenance, gates, and signage associated with restricted motorized access, and compliance costs associated with nighttime closure of the Scratchgravel Hills. | Same as Alt. B. | Short-term increase in cost for signage and long-term increase compared to Alts. B and C for route maintenance associated with constructing new connector routes and reconstructing existing routes. |
| **Overall costs of facility maintenance** | Overall transportation facility costs would be highest of all the action alternatives; almost three times more than Alts. B and D, and six times more than Alt. C. | Overall transportation facility costs would be less than Alts. A and D due to fewer open routes to maintain, but more than Alt. C. | Due to the overall reduction in available routes, transportation facility costs would be least of all the alternatives. | Overall transportation facility costs would be greater than Alts. B and C, but less than Alt. A. |
| ***East Helena TPA*** | | | | |
| **Road signing, maintenance, monitoring, and compliance** | Short-term lower costs for signage and compliance monitoring since fewer route restrictions. | Short-term increase in cost for compliance monitoring effort, trailhead development, and maintenance for trailheads in North Hills and for signage and sign maintenance for hunters with a disability access in South Hills. | Short-term increase in costs for compliance monitoring, signage to mark restricted routes. Indirect costs for sign maintenance and replacement greater than other alternatives. | Short-term increase in costs for compliance monitoring, signage and long-term increase for route maintenance associated with constructing new routes. |
| **Overall costs of facility maintenance** | Overall transportation facility costs would be similar to Alt. D and much less than Alts. B and C. | Overall transportation facility costs would be less than Alts. A and D and more than Alt. C. | Due to the overall reduction in available routes, transportation facility costs would be least of all the alternatives. | Overall transportation facility costs would be similar to Alt. A and less than Alts B and C. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***TRANSPORTATION FACILITIES – continued*** | | | | |
| ***Lewis and Clark County NW TPA*** | | | | |
| **Road signing, maintenance, monitoring, and compliance** | Short-term lower costs for signage and compliance monitoring since fewer route restrictions. | Short-term increase in costs for additional signage and compliance monitoring and from closing upper northwest portion of area to motorized vehicles and cross-country snowmobile travel. | Short-term increase in costs for additional signage and monitoring compliance and due to closing entire northwest portion of TPA to motorized vehicles and cross-country snowmobile travel. | Short-term increase in costs due to new signage and monitoring compliance and maintenance associated with addition of new routes including ATV-only and game retrieval route, and closing northwest portion of TPA to cross-country snowmobile travel. |
| **Overall costs of facility maintenance** | Overall transportation facility costs would be greatest of all alternatives since highest level of motorized access. | Overall transportation facility costs would be similar to Alt. D, less than Alt. A and more than Alt. C. | Due to the overall reduction in available routes, transportation facility costs would least of all the alternatives. | Overall transportation facility costs would be greater than Alts. B and C, but less than Alt. A. |
| **Motorized trail maintenance** | No costs for motorized trail maintenance. | No costs for motorized trail maintenance. | No costs for motorized trail maintenance. | Only alternative with motorized trail maintenance. |
| ***Boulder/Jefferson City TPA*** | | | | |
| **Road signing, maintenance, monitoring and compliance** | Short-term lower costs for signage and compliance monitoring since fewer route restrictions. | Short-term increase in costs for signage and compliance monitoring effort compared to Alt. A. | Short-term increase in costs for additional signage and compliance monitoring effort and due to closing southwest corner of TPA to motorized use and entire area to cross-country snowmobile travel. | Short-term increase in costs for signage and compliance monitoring effort. |
| **Overall costs of facility maintenance** | Greatest overall transportation facility costs due to the greatest level of motorized access. | Overall transportation facility costs would be less than Alts. A and D and more than Alt. C. | Due to the overall reduction in available routes, transportation facility costs would be the least of all the alternatives. | Overall transportation facility costs would be greater than Alts. B and C, but less than Alt. A. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***Upper Big Hole River TPA*** | | | | |
| **Road signing, maintenance, monitoring and compliance** | Lower costs for signage and compliance monitoring since fewer route restrictions. | Short-term increased costs from new signage and compliance monitoring due to changing seasonal use restrictions in various areas and closing some areas to cross-country snowmobile travel. | Short-term increase costs for new signage and compliance monitoring due to route closures and seasonal restriction changes and closing some areas to cross-country snowmobile travel. | Short-term increase in costs due to new signage and compliance monitoring due to route restrictions in various areas and closure of some areas to cross-country snowmobile travel. |
| **Overall costs of facility maintenance** | Transportation facility costs would be almost twice that of the action alternatives due to the highest level of motorized access. | Overall transportation facility costs would be more than two times less than Alt. A, more than Alt. C and slightly less than Alt. D. | Due to the overall reduction in available routes, transportation facility costs would be the least of all alternatives. | Overall transportation facility costs would be substantially less than Alt. A due to a great reduction in motorized access and slightly higher than Alts. B or C. |
| ***LANDS AND REALTY*** | | | | |
| **Renewable energy** | Renewable energy developments could result in requests for land use authorizations. | Same as Alternative A. | Same as Alternative A. | Same as Alternative A. |
| **Facility locating** | Would provide greatest flexibility in locating transmission lines, pipelines, and communication sites since no designated right-of-way corridor, use areas, exclusion areas, and limited avoidance areas would be identified. | Limiting new communication facilities to seven designated communication sites would concentrate these uses and diminish proliferation of separate rights-of-way. Designating utility corridors would focus locations of future facilities. | Same as Alternative B. | Same as Alternative B. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***LANDS AND REALTY - continued*** | | | | |
| **Land ownership adjustment** | No Change. | Would improve and provide better guidance by prioritizing actions associated with chronic management problems and protecting public resource values. Focus on identifying areas for future acquisitions associated with special designations and special status/priority species habitat. | Same as Alternative B. | Same as Alternative B. |
| ***SPECIAL DESIGNATIONS*** | | | | |
| ***ACECs*** | | | | |
| | Existing ACEC (Sleeping Giant) only area managed as an ACEC totaling 11,679 acres. | Four potential areas would be designated as ACECs totaling 70,644 acres. This alternative would provide the second greatest protection of relevant and important values. | This alternative provides the greatest protection of relevant and important values since all five potential areas totaling 87,893 acres would be designated as ACECs. | The second least amount of ACECs (three) and acreage (23,695 acres) would be designated as ACECs. |
| ***National Trails*** | | | | |
| | Lowest protection provided for the two National Trail corridors given that ROS, VRM, travel and oil and gas restrictions would be lowest. | Second highest protection afforded the National Trails as resource use restrictions would be greater than Alts. A and D. | Greatest protection of the existing National Trails and associated user experiences since all resource uses such as timber harvesting, motorized travel, rights-of-way, minerals, and oil and gas would be restricted the most through ROS, VRM, and travel management. | Second lowest protection for National Trails as potential impacts from other resource uses would be higher than Alts. B and C. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***Wild and Scenic Rivers*** | | | | |
| | Outstandingly remarkable values of all WSR eligible segments would be minimally affected as interim protective measures would be applied until suitability decisions were made. | Only two of the four eligible WSR segments would be recommended as suitable for NWSRS (Muskrat Creek and Upper Missouri River). The remaining two segments would be dropped from consideration. | All four segments would be recommended as suitable for consideration in NWSRS; interim management would be the same as Alternative A. The potential for long-term protection of the outstandingly remarkable values would be greatest of all alternatives. | Least protection provided for the WSR values as no river segments would be recommended as suitable for WSR management status. |
| ***Wilderness Study Areas (Fall back management if removed from wilderness consideration)*** | | | | |
| | Sleeping Giant and Sheep Creek WSAs would be managed as ACECs under the current Sleeping Giant ACEC Management Plan. | Four WSAs would be managed as ACECs providing some long-term resource value protection should Congress remove them from further wilderness consideration. Yellowstone River Island and Black Sage would be managed to protect their natural characteristics and outstanding values to a greater degree than Alt. D and a lesser degree than Alt. C. | Same as Alternative B, with the exception that oil and gas stipulations would be more restrictive for Black Sage (and protective of existing values) if dismissed from further wilderness consideration. | Same as Alternative B, with the exception that Black Sage would be open to all salable and leasable minerals and less protective oil and gas leasing stipulations of Alt. D. |
| ***SOCIAL AND ECONOMIC*** | | | | |
| ***Economic Environment*** | | | | |
| **Agricultural and livestock use** | Livestock grazing (actual use) would support 10 total (direct, indirect, induced) jobs and total labor income of $198,000. | Livestock grazing (estimated actual use) would support 10 total (direct, indirect, induced) jobs and total labor income of about $180,000. | Same as Alt. B, i.e. livestock grazing (estimated actual use) would support about 10 total (direct, indirect, induced) jobs and total labor income of about $183,000. | Same as Alternative A |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***SOCIAL AND ECONOMIC – Economic Environment – continued*** | | | | |
| | Dependency of local livestock operators on BLM forage would remain at less than 1 percent of total livestock forage needs. Approximately 185 operators have grazing permits on BLM public lands. BLM forage often provides a critical element of the livestock producer's matched complement of grazing, forage, and hay production.<br>Livestock grazing would continue to generate about $35,000 in annual government revenues; $8,400 would be distributed to the state and counties. | Changes in grazing management and economic effects would be spread unequally among permittees. Dependency and government revenues would be similar to Alternative A. | Changes in grazing management and economic effects would be spread unequally among permittees. Dependency and government revenues would be similar to Alternative A. | |
| **Forest products** | The combined effect of 9,800 CCF of timber sales would be 110 total jobs and $3.0 million in annual labor income. | The combined effect of 9,200 CCF of timber sales would be 100 total jobs and $2.8 million in annual labor income. | The combined effect of 4,100 CCF of timber sales would be 50 total jobs and $1.3 million in annual labor income. | The combined effect of 10,800 CCF of timber sales would be 120 total jobs and $3.3 million in annual labor income. |
| **Recreation** | An estimated 800 total local jobs and $20.6 million in total annual labor income would be supported by 1.33 million recreation visits per year on public lands. The amount of revenues generated by recreation management would be $123,000. | An estimated 790 total local jobs and $20.3 million in total annual labor income would be supported by 1.31 million recreation visits per year on public lands. Recreation revenues would be similar to Alternative A. | An estimated 780 total local jobs and $20.1 million in total annual labor income would be supported by 1.3 million recreation visits per year on public lands. Recreation revenues would be similar to Alternative A. | An estimated 800 total local jobs and $20.5 million in total annual labor income would be supported by 1.33 million recreation visits per year on public lands. Recreation revenues would be similar to Alternative A. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| **Mining and mineral** | An estimated 90 local jobs and $4.6 million in annual labor income would be supported by exploration, development, and production of 980,000 MCF of gas, 330,000 tons of limestone, 400 tons of dimension stone, and 20,000 tons of sand/gravel. Federal revenues from leases, rents, and royalties would be about $960,000. State and local revenues would be $480,000 and $100,000, respectively. | Economic impacts would be similar to those described for Alternative A. | The number of local jobs annual labor income supported by exploration, development, and production of 330,000 tons of limestone, 400 tons of dimension stone, and 20,000 tons of sand/gravel would be similar to current management. There would be no federal, state, or local revenues from leasing, rents, or royalties. | Economic impacts would be similar to those described for Alternative A. |
| **Ecosystem Restoration** | Ecosystem restoration activities, e.g. fuels treatments and pre-commercial thinning (1,275 acres), weed spraying (2,000 acres), and road closures (172 miles) would support about 10 jobs and $340,000 in labor income annually. | Ecosystem restoration activities, e.g. hazardous fuels treatments and pre-commercial thinning (2,560 acres), weed spraying (2,900 acres), road decommissioning (5 miles), and road clos*ures (318 miles)* would support about 20 jobs and $590,000 in labor income annually. | Ecosystem restoration activities, e.g. hazardous fuels treatments and pre-commercial thinning (450 acres), weed spraying (2,200 acres), road decommissioning (5 miles), and road closures (375 miles) would support less than 10 jobs and about $250,000 in labor income annually. | Ecosystem restoration activities, e.g. hazardous fuels treatments and pre-commercial thinning (3,345 acres), weed spraying (3,600 acres), road decommissioning (4 miles), and road closures (266 miles) would support about 20 jobs and $750,000 in labor income annually. |
| **BLM management effects on the local economy** | BLM management would support about 1,270 local jobs and $37.7 million in local labor income. This would be about 0.7 percent of total local jobs and 0.6 percent of total local labor income. | BLM management would support about 1,260 local jobs and $37.8 million in local labor income. This would be about 0.7 percent of total local jobs and 0.6 percent of total local labor income. | BLM management would support about 1,100 local jobs and $31.3 million in local labor income. This would be about 0.6 percent of total local jobs and 0.5 percent of total local labor income. | BLM management would support about 1,300 local jobs and $39.3 million in local labor income. This would be about 0.7 percent of total local jobs and 0.6 percent of total local labor income. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***SOCIAL AND ECONOMIC – continued*** | | | | |
| ***Economic Environment*** | | | | |
| **Indirect non-market and non-use values** | Based strictly on the number of acres that would be in an ACEC, Alternative A would have the lowest non-use values. | Based strictly on the number of acres that would be in an ACEC, Alternative B would have the second highest non-use values. | Based strictly on the number of acres that would be in an ACEC, Alternative C would have the highest non-use values. | Based strictly on the number of acres that would be in an ACEC, Alternative D would have the second lowest non-use values. |
| **Economic stability, diversity, and growth** | Economic stability (indicated by seasonal unemployment, sporadic population changes, and fluctuating income growth rates) and economic diversity (indicated by the number of economic sectors) would not be influenced by BLM resource management. Alternative C and to a lesser extent, Alternative B would indirectly provide an environment more conducive to continuing long-term population growth and corresponding economic growth because of more resource protection offered. | | | |
| **Weed management** | Economic benefits from weed management and costs (in terms of reduced agricultural output, reduced recreation use, increased soil loss and water pollution (sedimentation and turbidity) associated with the spread of weeds are unknown. | | | |
| **Soil and water** | Economic benefits from soil and water management and costs (from lost agricultural production, additional costs for municipal water treatments, shortened life of dams and reservoirs, additional cost of water for industrial purposes, reduced water recreation use, reduced soil productivity, and water pollution) associated with resource use are unknown. | | | |
| **Fire/Fuels** | Economic benefits from fire and fuels management (beyond those covered under forestry management) and potential costs (in terms of property losses, lost revenues from wildland fires, and increase suppression costs) associated with hazardous fuels buildup are unknown. | | | |
| **Social and Economic Goals** | All alternatives would, to varying degrees, provide opportunities for economic benefits while minimizing adverse impacts on resources and resource uses; sustain, and where appropriate, restore the health of forest, rangeland, aquatic, and riparian ecosystems to provide a sustained flow of economic benefits within the capability of the ecosystem; protect visual quality, wildlife habitats, and recreation opportunities to sustain non-market values; and make resource commodities available to provide a sustainable flow of economic benefits within the ecosystem. | | | |
| ***Environmental Justice*** | | | | |
| | No disproportionately high and adverse human health or environmental effects on minority and low income populations would occur. | Same as Alternative A. | Same as Alternative A. | Same as Alternative A. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***Public Health and Safety*** | | | | |
| **Abandoned mine reclamation** | Reclamation of abandoned mine sites would continue to remediate safety and environmental quality issues. | Same as Alternative A. AML program would reclaim shaft in Ringing Rocks potential ACEC reducing safety hazard. | Same as Alternative A. | Same as Alternative A. |
| ***Hazardous Materials*** | | | | |
| | Land use authorizations not issued for uses involving disposal or storage of hazardous materials. Lands proposed for acquisition or disposal would be inventoried for hazardous materials. | Same as Alternative A. | Same as Alternative A. | Same as Alternative A. |
| ***Social Environment*** | | | | |
| **Timber and Logging Interests** | No change to current social conditions under this alternative. | Alt. B would be favored over Alts. A and C by timber industry and workers because it provides for higher projected harvest levels and availability of forest products. | Alternative C would have the lowest projected harvest levels and therefore, would be less likely to be favored by those concerned about timber employment. | Likely to be the most favored alternative by the timber industry and workers concerned about employment because highest projected timber harvest levels. |
| **Ranching/Livestock Permittee Interests** | No change in authorized AUMs; projected levels of grazing would be maintained at current levels | Effects would be similar to Alternative A, but conflicts between livestock grazing and wheeled vehicles would be addressed. | Effects would be similar to Alternative B. | Effects would be similar to Alternative B. |
| **Recreation Interests** | Most roads open under this alternative.<br>Would not address concerns about conflicts between motorized and non-motorized use. | Emphasized balance of motorized and non-motorized recreation and access.<br>Entire Scratchgravel Hills closed to wheeled motorized use yearlong (with the exception of routes to residences. | Overall effect of reducing motorized recreation, but quality of experience may increase because user conflicts reduced.<br>Scratchgravel Hills closed after dark. | Emphasis on motorized recreation.<br>Motorized use of Scratchgravel Hills would be allowed 24 hours per day; would address some concerns about conflicts between motorized and non-motorized uses. |

**Table 2-24**
**Summary Comparison of Effects by Alternative**

| Resource or Aspect of Management | Alternative A (No Action) | Alternative B (Preferred Alternative) | Alternative C | Alternative D |
|---|---|---|---|---|
| ***SOCIAL AND ECONOMIC – Social Environment – continued*** | | | | |
| **Commercial Outfitter and Guide Interests** | Favored by outfitter guides over Alternatives B and C because fewer constraints. | Outfitters/ guides less likely to favor Alternative B because more constraints on their operations. | Outfitter/guides less likely to favor Alternative C because of more constraints on their operations. | Favored by outfitters/guides because fewest constraints. |
| **Groups/Individuals who give a high priority to resource protection** | Groups and individuals who give high priority to resource protection would be less likely to support this alternative than Alternatives B or C. | Groups and individuals who give high priority to resource protection would be likely to favor this alternative over Alternatives A and D, but may be less likely to favor this Alternative over Alternative C. | Groups and individuals who give high priority to resource protection would likely favor Alternative C because of wildlife and riparian habitat protection and establishment of WSRs and greatest acreage in new ACECs. | Groups and individuals who give high priority to resource protection would be less likely to favor Alternative D than the other action alternatives. |
| **Groups/Individuals who give a high priority to resource use** | Groups and individuals concerned about resource use would probably favor this alternative or Alternative D. | Groups and individuals who give high priority to resource use would be more likely to favor Alternative B over Alternative C, and possibly Alternative A. | Groups and individuals who give high priority to resource use would less likely favor Alternative C because timber harvest, oil & gas development, etc. would be more restricted than under Alternatives B and D. | Groups and individuals who give high priority to resource use would be likely to favor Alternative D because timber harvest would be highest and oil and gas constraints would be less restrictive. |
| ***Tribal Rights*** | | | | |
| | Provides opportunity to exercise tribal treaty rights such as hunting, fishing, and gathering on public lands. | Same as Alternative A | Same as Alternative A | Same as Alternative A |